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YMGI, A COMFORT MAKER, A JOY COMPANION, A SATISFACTION GUARANTOR...

INSTALLER'S INSTRUCTION & USER'S MANUAL

DC INVERTER MULTIPLE ZONE (59) (2)

SYMPHONY CHOIR

OUTDOOR UNIT (CH)



⚠ WARNING

This product is designed and manufactured free from defects in material and workmanship for normal use and maintenance. Installation, operation, maintenance and service shall follow professional practices for regular cooling and heating equipment, NEC, State, City or Local Codes and related manuals from YMGI. Otherwise, damage to equipment or property and even injury to people may occur.

Installer: Currently licensed HVAC technician only. Read manual before installation. Fully fill in warranty registration card.

User: Keep this manual for future maintenance and service use.

Service: Use this manual for service reference.



LITERATURE: LIT-WMMS-(59)-DC IVTR-AM-II-20121027

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⚠ CAUTION All Units Shall Be Installed by Experienced or Licensed Contractor Or Technician. Read Manuals before Installation.

⚠ CAUTION Following NEC, State and Local Codes and Installation Instructions of All Units, Otherwise Unit Warranty Will Be Void and Serious Damage To People Or Property May Be Caused.

⚠ WARNING YMGI Group Will NOT Take Any Responsibilities for Any Damage or Loss Due to Do-It-Yourself(DIY) self-installation and other Improper Installation or Operation or Natural Disaster.

⚠ WARNING Don't Supply Power until All Wiring and Tubing and Checking is Completed. Ground the Unit Following Instructions and NEC, State and Local Codes.

⚠ DANGER Connect All Wiring Securely. Loose Wire or Other Bad Contact May Cause Arc or Overheating and Fire Hazard.

Installation or Service Technician to Contact Manufacturer Technical Support
Toll Free Number: 1-866-833-3138 x 703
Email: techsp@ymgigroup.com
(For any abnormal or unit issues, end user needs to contact installation or service contractor to check the unit, before having them contact manufacturer technical support for technical diagnosis or trouble shooting help.)

LIMITED PRODUCT WARRANTY POLICIES



LIMITED PRODUCT WARRANTY
-STANDARD POLICIES

YMGI Group (YMGI) products are designed and manufactured free from defects in workmanship and materials for normal use and maintenance. YMGI products are designed and manufactured to the qualities to keep installer(s) and user(s) from any trouble and to bring total comfort to unit(s) owner(s) and end user(s).

YMGI warrants its products against any unexpected issues occurred to product itself, though designed and manufactured and expected to work much longer than the warranted period, **as follows:**

- 1. Five-year compressor and sealed system
- 2. One-year other parts
- 3. Ground shipping only

Above warranties valid only if all the following are satisfied:

- 1. The unit was fully installed by currently licensed HVAC technician(s), from beginning to completion.
- 2. The unit is installed per NEC codes and local codes.
- 3. The unit is installed following installation instructions coming with YMGI products, and/or provided by YMGI Group.
- 4. The unit is fully checked and tested by installer(s) to make sure installed unit functions as designed.
- 5. Correct operation of the unit is explained clearly to the owner(s) by installer(s).
- 6. All fields are filled or checked, signed and dated by both installer(s) and owner(s) on the **LIMITED PRODUCT WARRANTY REGISTRATION CARD**.
- 7. **Warranty Registration Card** must be mailed, **along with an Original Copy of Full System Installation Service Charge Invoice from the Currently Validly Licensed HVAC Technician Company**, within 7 calendar days after the original installation is finished or your NEW home (unit is not checked or used yet) is closed, whichever comes later, by the owner(s) to Warranty Department, YMGI Group, POB 1559, O'Fallon, MO 63366, USA.

A full copy of **Warranty Registration Card** and **Original Copy of Full System Installation Service Charge Invoice** must be kept by owner(s) safely along with other documents that come with the product.

No warranty may be valid if any one of above 7 conditions is not fulfilled. Warranty begins on the date of the original installation or the date of NEW home (unit is not checked or used yet) is closed, whichever comes later.

As its only responsibility, and your only remedy, YMGI will furnish replacement part only (no labor), without charge for the PART(S) and Ground Shipping ONLY, to replace any part found to be defective due to manufacturer's workmanship or materials under normal use and maintenance. Any part replaced pursuant to this warranty is warranted only for the unexpired portion of the warranty term applying to the original part.

This warranty does not apply to nor cover any other cost associated with the service, repair or operation of the product or the like.

Defective product(s) or part(s) must be identified by your installer, along with **YMGI Group-approved Service Center(s) or Technical Support.**, whichever is available in the area where unit is installed. Final decision is made by YMGI Group. An **"YMGI Group Customer Service/Technical Support Form Daily Log Sheet"** must be filed properly for effective communication and/or file management purpose.

Warranty policy herein DOESN'T cover:

- 1. Any damage or repairs to properties and injuries to person(s) as an incident or consequence of faulty or improper transportation, installation, operation, maintenance, or service that ISN'T physically performed by YMGI Group.
- 2. Any damage caused by frozen or broken water pipes in the event of equipment failure, any damage or injury as a result of floods, fires, winds, lightning, accidents, corrosive atmosphere or other conditions beyond the control of YMGI Group.
- 3. Any damage resulted from use of components or accessories not specified, supplied or designated by YMGI Group.
- 4. Any damage because of failure to start due to interruption and/or inadequate electrical service.
- 5. Any products sold or installed outside the United States or Canada.
- 6. Any labor charge from your technician company during any stage of the installation or service, for any reasons.

Any damage due to service performed by third parties, it is the product receivers(s) or owner(s)'s responsibility to claim such damage resulted from these activities to the responsible party:

- 1. Transportation, installation and operation.
- 2. Normal maintenance and service as described in the installation and operating manual, such as cleaning of the coils, filter, cleaning and/or replacement and lubrication.

YMGI keeps on product improvement and such improvement is purposed to further benefit installers, owners, users and others. Such improvement or changes, even without notice, including but not limited to specifications, functions, appearance, sizes, packages or others, of the products are YMGI's sole right(s). These improvement or changes will not invalidate the limited warranty stated herein.

For further information about this warranty, contact Warranty Department, YMGI Group either by faxing to **(866) 377-3355** or by mailing to **Warranty Department, YMGI Group, POB 1559, O'Fallon, MO 63366, USA**





TO END USERS- MUST READ PRIOR TO HIRING A CONTRACTOR TO INSTALL

- 1. GOOD UNITS CAN MALFUNCTION, MAY NOT WORK CORRECTLY OR PROPERLY, AS DESIGNED AND MANUFACTURED, IF NOT INSTALLED CORRECTLY OR PROPERLY. MUST DO IT RIGHT ALL THE TIME, ESPECIALLY FROM THE VERY BEGINNING.
- 2. CUSTOMER DO-IT-YOURSELF (DIY) INSTALLATION CAUSED AND/OR MAY CAUSE TROUBLE, IN DIFFERENT FORMATS, TO THE UNIT, YOUR COMFORT EXPECTATION, YOUR HEALTH.
- 3. HANDY MAN OR SMART PEOPLE OR EVEN SOME PROFESSIONALS MAKE MISTAKES SOMEWHERE OR SOMETIMES. DON'T TRY TO SAVE MONEY BY **DIY**, HAND OVER THE INSTALLATION TO THE CURRENTLY LICENSED PROFESSIONALS, SINCE THEY WILL TAKE CARE OF YOUR UNITS AND YOUR COMFORT.
- 4. DIY INSTALLATION MAY SAVE YOU SOME MONEY UP FRONT, BUT WILL COST YOU MORE AND BRING HEADACHE, DOWN THE ROAD.
- 5. YMGI DOESN'T AGREE, DOESN'T ALLOW, DOESN'T WARRANT, DOESN'T ENSURE, DOESN'T ENCOURAGE, DOESN'T RECOMMEND DIY INSTALLATION, UNLESS YMGI STATES DIY INSTALLATION IS ALLOWED, IN WRITING.
- 6. CUSTOMERS WILL LOSE FACTORY WARRANTY ON **DIY** INSTALLED HVAC PRODUCTS AND TAKE THEIR RISKS FOR DIY INSTALLATION.
- 7. DON'T PAY THE CONTRACTOR IN FULL, UNTIL ALL FUNCTIONS OF THE SYSTEM HAVE BEEN CHECKED AND YOU ARE SATISFIED.
- 8. IT IS THE INSTALLATION CONTRACTOR'S RESPONSIBILITY TO INSTALL AND SERVICE THE SYSTEM TO MAKE SURE THE UNIT WORKS CORRECTLY AND PROPERLY OVER TIME. YMGI DOESN'T INSTALL NOR SERVICE YOUR UNITS ON BEHALF OF THE INSTALLER. YMGI WILL HELP THE INSTALLER OR SERVICE PROVIDER BY ANSWERING QUESTIONS AND PROVIDING TECHNICAL SUPPORT.
- 9. IT IS THE CUSTOMER'S RESPONSIBILITY TO SELECT THE UNIT CORRECTLY (UNIT SIZE, SEER, ELECTRIC POWER, CONTROL, REFRIGERANT, DC OR FIXED SPEED, LOOKING AND OTHERS).
- 10. IT IS THE CUSTOMER'S DECISION WHAT UNIT TO BUY AND TO INSTALL. PUT DOWN ALL REQUIREMENTS IN WRITING, BEFORE ORDERING.
- 11. WHO CAN INSTALL THE HAVC PRODUCTS HEREOF:
 - * ONLY LICENSED HVAC CONTRACTOR(S)/TECHNICIAN(S), WHO KEEPS A CURRENT VALID LICENSE FOR HEATING AND COOLING EQUIPMENT, SUCH AS AIR CONDITIONER AND HEAT PUMP.
 - * DON'T DO-IT-YOURSELF (DIY) HVAC EQUIPMENT, WHICH IS NOT ALLOWED BY THE LAWS, NOR WARRANTED BY YMGI.
- 12. IMPORTANT NOTES FOR INSTALLATION
 - * SIZE WIRES AND CIRCUIT BREAKERS CORRECTLY, PER NEC CODES.
 - * READ SPECIFICATION SHEETS OR OTHER MANTERIALS FOR LIMITS OF OPERATING TEMPERATURE RANAGES, PIPING LENGTH, AND PERFORMANCE AT DIFFERENT AMBIENT TEMPERATURES.
 - * READ MANUALS AND CHECK TO MAKE SURE ALL ARE CLEAR BEFORE INSTALLING THE UNITS.
 - * WATCH INSTALLATION AND MAKE SURE THERE ARE NO BUGS LEFT IN YOUR HAVC SYSTEMS.
 - * COVER THE ENDS OF THE INTER-CONNECTING COPPER TUBES BEFORE PULLING THROUGH STRUCTURES TO KEEP DEBRIS OR OTHER FOREIGN SUBSTANCES FROM ENTERING THE REFRIGERATION SYSTEMAS IT WILL CONTAMINATE THE SYSTEMAND DAMAGE THE SYSTEM, DOWN THE ROAD.
 - * VACUUM THE INTERCONNECTING TUBES AND INDOOR UNITS AND CHECK FOR LEAKAGE, BEFORE RELEASING REFRIGERANT FROM OUTDOOR UNIT TO INDOOR UNIT.
 - * TRIAL RUNNING SYSTEMSAND CHECK ALL FUNCTIONS, BEFORE PAYING OR LETTING THE INSTALLER LEAVE THE JOB SITE.
 - * JOT DOWN INSTALLER'S CONTACT INFORMATIONAND SERVICE INVOICE/RECIEPT FOR FUTURE QUESTIONS OR CUSTOMER SERVICE.



VERY IMPORTANT NOTES TO DEAR CUSTOMERS FOR REFRIGERANT RELATED HVAC PRODUCTS, ESPECIALLY THE SPLIT TYPE

By Placing Your Order and Purchasing Our Products from an Authorized Distributor, or by Opening the Carton Box, You Shall Have Read All Manuals and Instructions and Understood and Accepted and Agreed to All the Following:

What You Will Need to Do When Receiving the Products

Shall Check the Delivery Against the Order and Packing List to Make Sure There is No Unit/Part/Accessory Missing or Damage.

Shall Mark Any Unit and Part and Accessory Missing on the Delivery Confirmation Paperwork.

Shall Report Any Freight Damage to the Carrier within 24 Hours as of Delivery.

Shall Report Any Unit and Part and Accessory Missing or Damage to Sales/Customer Service within 24 hours as of Delivery.

No Report after 24 Hours as of Delivery, Meaning Units/Parts/Accessories Have Been Delivered Completely and No Damage is Found.

What You Will Accept before Breaking the Box Seal and Opening the Box

Due to Continuous Product/Engineering Improvement, as Well as Viewing Angles and Background Affects, the Contained Unit May Look Slightly Different from What is Shown on the Carton Box or Spec. Brochures.

The Units Were Manufactured Some Time Prior to the Shipping Date. Normally The Box is Sealed and The Units/Parts Contained Are New and Have not Been Used. From Time to Time, Shipper Does Select Boxes Randomly to Check the Contained Units/Parts to Make Sure Everything is All Right, before Shipping. But, All Units/Parts Have not Been Used.

The Product is Designed and Manufactured and Tested to Be Free of Defects at Manufacturer Plants, but if the Unit Will Work Properly or Not, Only Depends upon Many other Factors, Especially the Quality of Installation. Anything Not Working May Not be the Product Itself. Which Could be Power Failure, Insufficient or Wrong Wiring, Not Vacuuming, Pipe Bending or Kinking or Leaking, Unit/Parts Dropping, Water Damage, and So on.

If the product, for Some Uncontrolled Factors During Transportation and Installation, Doesn't Function Properly or Timely Due to Unexpected Failure, You Agree to Have the Licensed Installer (HVAC or Electrician), instead of Yourself, Call the Manufacturer Technical Support and/or Customer Service to Walk through Some Technical Steps Together, In Order to Find Out the Failure Reason and What Parts Are Needed. All the Effort is To Limit the Problems and Make the Unit Work for You As Soon As Possible and There Will Be No Extra Charge.

What You Need to Pay Attention to at Installation

Understand to Save on Somethings but Not Everything.

In Order to Ensure Installation Quality and Validate the Factory Warranty, You Must Hire a Currently Validly Licensed HVAC Technician to Conduct Electricity and Refrigerant-Related Installation and Trouble-Shooting Work and Follow Related Local/DOE/EPA Codes and Laws.

Contact Your Licensed HVAC Technician to Determine What Portion Can be Done Do-it-Yourself (DIY) and Save Some Money. DIY Installation Varies Upon Many Factors. DIY Installation May Succeed, but May Be Taking Chance and/or Running Risks.

Decision Maker's Own Risks and Is NOT Guaranteed and Endorsed by the Manufacturer.

Do Not Pay your Technician in Full, Until at Least 30 Days after All Installation is Finished and Unit(s) Work Properly.

What You Need to Know During Installation or Operation

Cover the Interconnecting Pipes Before Pulling through Structures, to Keep Dust, Debris and Other Foreign Substances from Entering and Damaging the Refrigeration System.

Vacuum and Conduct Leakage Check for the Interconnecting Pipes and Indoor Unit. If There is Any Leakage, Need to Find it and Fix It.

Must Make Sure the System is Sealed Tight without Any Leakage Potential, before Releasing Refrigerant from the Condensing Unit to the Interconnecting Pipes and Indoor Unit.

For Technical Questions, In Order to Help You in a timely manner, You Shall Have the Licensed Technician/Installer, Instead of Yourself, Check What is Going on before Talking to the Sales Distributor and/or Manufacturer Technical Support from Your Job Site.

For Product Pricing and Product Availability, You Shall Talk with Sales.

For How to Use the Unit or if You Need Any Parts, You Shall Read the Manuals or Go Online or Contact Your Sales/Customer Service at Distributor, if Not Available, then Contact Customer Service/Support at Manufacturer, via the Contact Information Printed in the Manual and/or Unit.

What You Need to Know Before Your Contractor/ Technician Finishes the Installation

Witness the Contractor/Technician Checking the System Thoroughly and All Functions and Make Sure All Are Good.

Have the Contractor/Technician Sign on the Paperwork.

Don't Pay to the Contractor/Technician in Full Until the Whole System Works Smoothly without Any Problem for at Least 30 Days.

Tell the Contractor/Technician that They Need to Come to the Job Site to Check the System, if There is Anything Not Right, Since You Pay to Get Their Service.

Tell the Contractor/Technician that They, not the Customer/End User, Will be the One to Talk to the Factory Technical Support, Technically, if There is Anything Wrong or Abnormal, In Order to Communicate Efficiently and Productively.

What You Need to Know about Warranty

If the Units are Installed Properly, Following Manufacturer Instructions, by Licensed HVAC Technician, the Units are Covered with a Standard Warranty which Covers 5-year Compressor and 1-year Other Parts Only.

In Standard Factory Warranty, **NO LABOR IS INCLUDED.**

Extended Warranty shall be Purchased at Original Unit Ordering, at Extra Cost to Cover More Years of Parts and/or Labor.

Units/Parts Shipping is Ground Only. Expedited Express Shipping Shall be Requested in Writing at Extra Cost.



IMPORTANT NOTES

- * A Good unit may not work properly or correctly. as designed or manufactured, if not installed properly or correctly.
- * Customer do-it-yourself (DIY) installation caused and/or will cause trouble to the unit and your property and yourself.
- * YMGI doesn't allow nor recommend nor honor warranty for DIY installation. Customers take full responsibility for DIY installation.
- * DIY installation may save money up front, but will cost you more money and headaches down the road.

SAFETY CAUTIONS AND ALERTS

Installation, Operation, Maintenance, and Service shall follow professional standards and practices for conventional cooling and heating equipment, under International, National, State, City or Local Codes, and follow guidelines listed in all related manuals and associated product information provided directly, from YMGI. Failure to adhere to proper Installation, Operation, Maintenance, and Service could result in unit malfunction damage to equipment, personal property, or physical injury, or even death, which YMGI is not responsible for.

Installation must be performed following the YMGI Installation/Maintenance Manuals.

Installation must be performed by a certified technical installer only. DO NOT attempt to install the unit by yourself trying to save money. **Do-It-Yourself (DIY)** installation will void YMGI provided warranty and could result in injury or death, or property damage due to fire, electrical shock, leaking, collapsing, which YMGI is not responsible for.

Install the unit onto a strong load bearing structure. The location must be capable of handling the weight load of the unit to prevent the unit from falling or causing injury. Attach both the indoor and outdoor units to the brackets that are fixed to the right position securely.

Only use manufacturer specified and codes allowed wires and conduits to connect to the units so the stress is not applied to the sections. Incomplete connecting and insecure fixing could cause fire or damage.

Wiring must conform to national regulations. Failure to adhere to these standards could result in personal injury or death or property damage due to fire, electrical shock, falling units, or leaking.

Connect the power cord directly to a designated and exclusive AC Power Circuit Breaker and or Disconnect Switch. The circuit must exceed permissible currents and is free of insulation and contact defects. Shall refrain from intermediate or multiple connections to avoid fire or electric shock.

DO NOT supply power until all wiring and tubing is checked completely.

Double check for gas leaks during or after installation. The refrigerant gas may cause harmful substances when subjected to heat or fire. Refrigerant leakage will cause unit not to generate enough cooling or heating and even damage compressors and other parts.

Shut off the main power prior to and during installation to avoid electrical shock. Make sure that the electrical power is disconnected from the unit by making a notice or put a sign at the power switch panel, to keep other people from setting the power back during installation.

Connect all wiring securely. Any loose wire or other bad contact may cause an electrical arc, overheating, or fire hazard. Make sure that the unit is grounded following YMGI Instructions and NEC, International, State, City, and Local Codes. Electrical cover shall be securely attached to the indoor and outdoor unit service panels, otherwise, could result in fire or electric shock due to accumulation of dust, sediments, water, moisture, etc.

Only use authorized YMGI parts in the installation, maintenance, service, and repair of YMGI units. The use of non-authorized or defective parts will void the warranty and could cause injury or death or property damage due to water leakage, falling units, fire, electric shock, etc.

Pay extreme caution to interconnecting refrigerant copper tubing, when installing or relocating the unit. Make sure that no other substance than the specified refrigerant enters the refrigeration circuit. Any presence of foreign substances such as air or water or moisture can cause an abnormal pressure rise or overheat, which will result in an inefficient unit performance or unit malfunctions, and will shorten unit lifetime.

Pay extreme caution to interconnecting refrigerant copper tubing when installing or relocating split system, as applicable.
1) Make sure that no substance other than the specified refrigerant enters the refrigeration circuit. Any presence of foreign substances such as air or water or moisture can cause an abnormal pressure or overheat which will result in an inefficient unit performance or unit malfunction and will shorten the longevity of the unit.
2) Tape two ends of the copper tubing, tape the wires for the corresponding indoor unit to the copper tubing, and mark well with either A, B, C or D to identify each copper tubing/wiring bundle. Do not cross wire or mismatch tubing among indoor units of the multiple zone systems. Connect the electrical wiring and copper tubing from each zone of indoor unit to the corresponding wiring and copper tubing connections of the corresponding outdoor section (at outdoor condensing unit). Failure to do so will cause unit malfunctions, or damages to the compressors and other parts in the unit and even property or personal injuries.



IMPORTANT NOTES

YMGI LIABILITY DISCLAIMER

YMGI is NOT and shall NOT be responsible for any problems due to customer do it yourself(DIY) installation, non-licensed installation, and other unprofessional, incorrect, incomplete installation, abuse to the unit, or abnormal usage which would be considered outside normal constraints, or recommended ranges, and natural disasters such as fire, flood, earthquake, lighting, or others similar.

YMGI IS NOT AND SHALL NOT BE RESPONSIBLE FOR:

Damage to the units or property or person due to careless, or incautious, or rough handling at job site, such as pulling wires or pipes or plastic parts too hard, dropping units, robbing unit surfaces, and etc.

Damage to the units or property or person due to unprofessional or incorrect or incomplete mechanical installation of units. Examples, not limited to, are: sharp bending, not finding kinks, cracking or deterioration of connecting pipes, unevenly sitting units, not securing the units, not cleaning or leaving debris inside of or not tightening interconnecting pipes, not finding refrigerant or water leakage, not vacuuming, not opening refrigerant stopping valves at condensing units, not checking pressures, not covering bared refrigerant pipes and connections, not taping wire connections, not sealing drain pipe connections, incorrect piping such as crossing piping among multiple zones, and etc.

Accumulated costs, services, or disasters due to unprofessional or incorrect or incomplete installation, or abnormal usage of the units.

Under performance or damage to the unit, property or person, at low vacuum level due to unprofessional or incautious or bad installation, or damage to the unit or interconnecting pipes after installation and during usage.

Under performance or damage due to exceeding the recommended distances or elevation levels between indoor and outdoor units.

Under performance or damage due to the presence of any foreign substances left inside refrigeration pipes.

Under performance or damage due to the materials left in the air-conditioner during installation.

Under performance due to poor installation or abnormal usage in other formats.

Water leakage problems due to incorrect or poor installation or unsealed drain hoses.

Damage due to refrigerant or oil leakage as a result of unsuccessful pipe installation or damage to the unit and or pipes during or after installation.

Damage due to supplying power before all wiring and tubing is completely finished and checked.

Damage due to not keeping units in the right positions during handling, installation or operation.

Damage to the units or property or person due to any other Improper Usage not conforming to YMGI user regulations, user operation manuals and factory recommendations.

Under performance or damage due to operating the air conditioning system under poor physical conditions such as anywhere there is airflow blockage, too much sunshine, too much corrosive gas or the sort.

Under performance or damage due to the Usage outside the YMGI recommended operation ambient conditions including proper temperature and humidity ranges.

Under performance or damage due to the undersized or oversized unit selection, improper design, incorrect unit anticipation, and the sort.

Damage due to not grounding or poorly grounding unit, incorrectly wiring units, loose or unsecured wiring, or other bad contact which may cause an electrical arc, overheating, or fire hazard.

Damage or repairs required as a consequence of faulty installation or application.

Damage due to failure to start as a consequence of exceeding recommended voltage ranges (too low or too high), blown fuses, open circuit breakers.

Damage due to the inadequacy or interruption of electrical service.

Damage or repairs needed as a consequence of any misapplication, abuse, improper servicing, unauthorized alteration, or improper operation.

Damage due to the usage of parts not supplied or designated by YMGI Group.








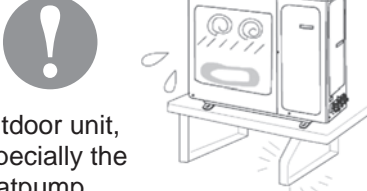


Damage to the unit, property, and/or person of whatever kind, direct or indirect, special or consequential, resulting from the improper installation or usage of such products.

Damage from the units installed and operated outside **USA or Canada**.

Damage as a result of floods, winds, fires, lightening, accidents, corrosive atmosphere, or other conditions beyond the control of YMGI Group.



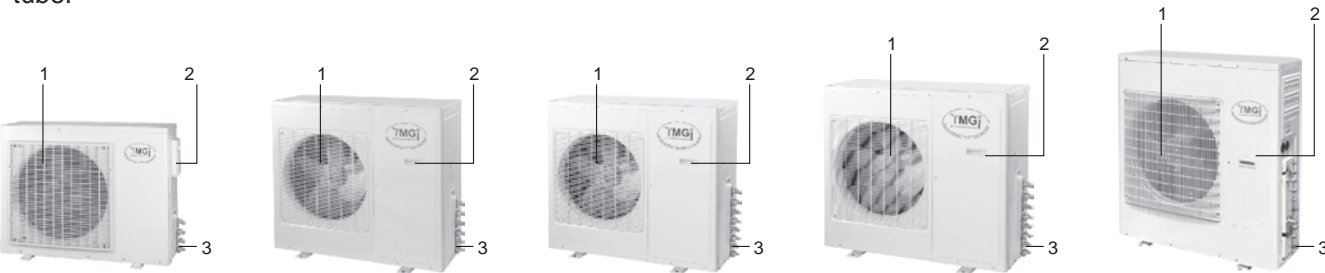
WARNINGS FOR INSTALLATION, OPERATION, MAINTAINING AND SERVICE

<p>When smelling a burning or smoke, turn off unit and disconnect the power and contact your installation or service technician without delay.</p>  <p>If the abnormal or danger is not found and removed, keeping on operating the unit will damage the unit or even cause electric shock or fire.</p>	<p>Must connect the unit to dedicated HVAC circuit breaker of proper size.</p> <p>Shall not turn on and then off the unit back and forth frequently.</p>	<p>Must not cut off or damage power cables and control wires.</p> <p>In case of any damage found on wires, must replace with good one without any delay.</p> 
<p>Don't entangle electrical wires or leave extra length of wire in the unit.</p>  <p>Never use indoor wires for outdoor use.</p>	<p>Not to connect unit to the wall switch.</p>  <p>Disconnect the power supply, if not using the unit for quite a while.</p>	<p>Never drag wires too hard, or use wire to hang or band or fasten anything.</p> 
<p>Before cleaning, it is necessary to stop unit operation and off the power supply.</p>  <p>Must turn off unit and disconnect electrical power, before cleaning or servicing the unit.</p> <p>Suggest to put a warning sign at the switch, to avoid accidental turning on the power by somebody who doesn't know service is in process.</p>	<p>Only apply correct electrical power to the unit (208-230/1/60).</p> <p>The compressor will vibrate if the voltage is too low or too high. Electrical components may fail, if voltage is too high.</p>	<p>Don't attempt to install or repair the unit by yourself. Saving on these work is not worthy, since you miss chance to have the professional look into the unit for a full diagnosis and complete repair. Also, factory warranty will be lost.</p>  <p>Handy man may successfully conduct some work. But, it is about responsibility and liability. Customer will have to take responsibility and liability for the DIY installation or or repair.</p>
<p>Mounting bracket must be sturdy and secured.</p>  <p>Outdoor unit, especially the heatpump outdoor unit, must be installed at least 3-5 inches above the ground, to keep from possible ice being built up in cold weather.</p>	<p>Don't step onto the top of unit.</p> <p>Don't place anything atop of it.</p> 	<p>The unit must be securely grounded.</p> <p>The cable shall be connected to the grounding device in the home or building.</p> 

NAMES OF THE PARTS

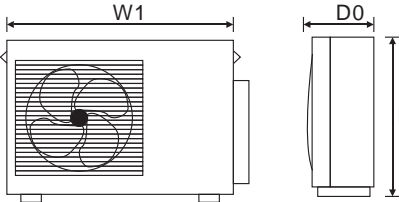
⚠ WARNING

- * Be sure to cut off the power supply before cleaning the air conditioner; otherwise electric shock might happen.
- * Wetting of air conditioner may cause the risk of electric shock. Make sure not to wash your air conditioner in any case.
- * Volatile liquids such as thinner or gasoline will cause damage to the appearance of air conditioner. (Only use soft dry cloth moist cloth clean the air conditioner cabinet).
- * This product must not be disposed together with the domestic waste. This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.
- * The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.



NO.	WMMS-21CH WMMS-30CH	WMMS-24CH WMMS-36CH	WMMS-42CH	WMMS-48CH	WMMS-60CH
1	Air Discharge grille	Air Discharge grille	Air Discharge grille	Air Discharge grille	Air Discharge grille
2	Wiring Panel/Handle	Front side panel/handle	Front side panel/handle	Front side panel/handle	Front side panel/handle
3	Valves	Valves	Valves	Valves	Valves

TECHNICAL DATA

MOD		WMMS-21CH WMMS-30CH	WMMS-24CH WMMS-36CH	WMMS-42CH	WMMS-48CH	WMMS-60CH	UNIT
Electricity data							
Electricity supply		208-230/1/60					
HVAC type fuse or circuit breaker		30	30	30/40	40	50	AMP
Minimum power cord size		10	10	8	8	8	AWG
Refrigerant charge (R410A)		56	88	88	88	169	OZ
Size							
	W1	33.3	35.25	35.25	37.4	40.25	Inch
	H	23.5	27.6	27.6	27.5	43.5	Inch
	D0	15.0	15.75	15.75	15.75	17.5	Inch

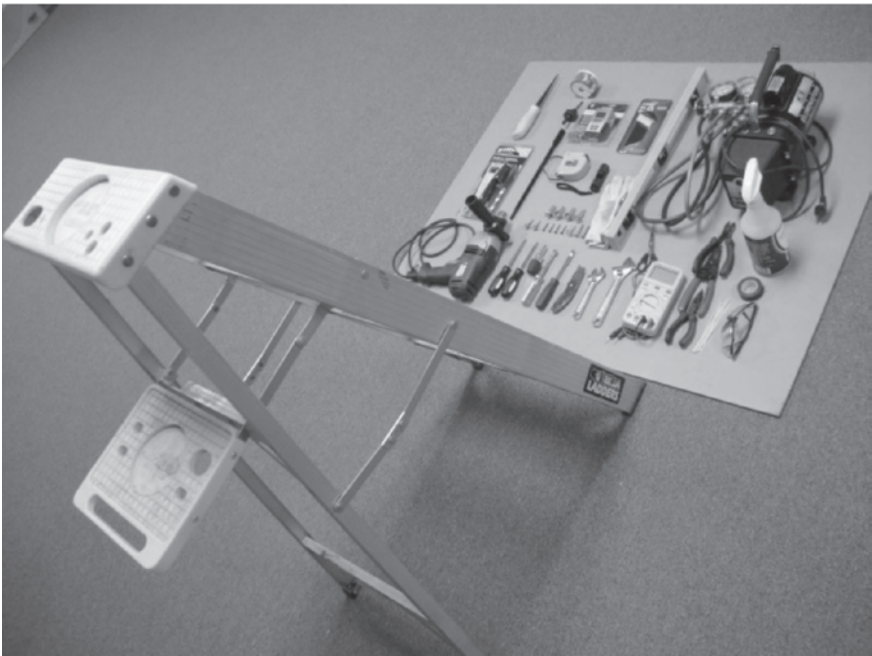
OUTDOOR UNIT WORKING TEMPERATURE RANGE

	Outdoor side DB(°F)
Maximum cooling	115(T1)
Minimum cooling	20
Maximum heating	75
Minimum heating	5

SPECIFICATION

Outdoor Unit Models		WMMS-21CH-V2B(59)(2) (1 to 2) WMMS-30CH-V2B(59)(2) (1 to 2)	WMMS-24CH-V2B(59)(2) (1 to 3) WMMS-36CH-V2B(59)(2) (1 to 3)	WMMS-42CH-V2B(59)(2) (1 to 4)	WMMS-48CH-V2B(59)(2) (1 to 4)	WMMS-60CH-V2B(59)(2) (1 to 5)
Power Supply		208-230/1/60				
Cooling Capacity* (Btu/h)	Max.	21,000	28,000	42,000	48,000	60,000
	Rated	18,000	24,000	28,000	30,000	42,000
	Min.	7,200	10,000	10,000	10,000	12,000
Total Power Input in Cooling Mode* (W)	Max.	2300	3300	4500	4500	5100
	Rated	1550	2250	2600	2600	3950
	Min.	650	800	900	1000	1200
SEER		16.0	16.0	16.0	16.0	16.0
HSPF		8.2	8.2	8.2	8.2	8.2
Heating Capacity* (Btu/h)	Max.	22,000	33,000	47,000	49,000	62,000
	Rated	19,000	29,500	31,000	33,000	46,000
	Min.	6,500	9,000	9,000	9,000	10,000
Total Power Input in Heating Mode*	Max.	2400	3000	3500	3500	4800
	Rated	1750	2500	2920	2920	4400
	Min.	650	800	900	1000	1200
Liquid Valve Size		2 x 1/4"	3 x 1/4"	4 x 1/4"	4 x 1/4"	4 x 1/4" + 3/8"
Gas Valve Size		2 x 3/8"	3 x 3/8"	4 x 3/8"	4 x 3/8"	2 x 3/8" + 2 x 1/2" + 5/8"
Compressor Manufacturer/trademark		Sanyo / Mitsubishi / Others	Sanyo / Mitsubishi / Others	Sanyo / Mitsubishi / Others	Sanyo / Mitsubishi / Others	Sanyo / Mitsubishi / Others
Compressor Oil		/ FV50S /	/ FV50S /	/ FV50S /	/ FV50S /	/ FV50S /
L.R.A. (A)		27	45	45	45	55
Compressor RLA (A)		8.4	9.7	9.7	10	13
Compressor Power Input (W)		1245	2200	2200	2200	3000
MCA (A)		15	20	20/30	30	50
Fuse or Circuit Breaker (HVAC Type)		30	30	30/40	40	50
Throttling Method		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Starting Method		Transducer starting	Transducer starting	Transducer starting	Transducer starting	Transducer starting
Recommended Working Ambient Temp Ranges (F)		AC: 20 to 115 HP: 5 to 75	AC: 20 to 115 HP: 5 to 75	AC: 20 to 115 HP: 5 to 75	AC: 20 to 115 HP: 5 to 75	AC: 20 to 115 HP: 5 to 75
Condenser		Aluminum fin-copper tube	Aluminum fin-copper tube	Aluminum fin-copper tube	Aluminum fin-copper tube	Aluminum fin-copper tube
Output of Fan Motor (W)		60	60	60	60	140
Fan Motor RLA (A)		0.65	0.65	0.65	0.65	1.1
Fan Motor Capacitor (uF)		3	3.5	3.5	3.5	6
Air Flow Rate of Outdoor Unit		/	/	/	/	/
Fan Type-Piece		Axial fan 1	Axial fan 1	Axial fan 1	Axial fan 1	Axial fan 1
Fan Diameter (Inches)		18.1	18.1	18.1	18.1	22.5
Defrosting Method		Auto Defrost	Auto Defrost	Auto Defrost	Auto Defrost	Auto Defrost
Climate Type		T1	T1	T1	T1	T1
Isolation		I	I	I	I	I
Moisture Protection		IP24	IP24	IP24	IP24	IP24
Max. Operating Pressure at High Side (PSI)		550	550	550	550	550
Max. Operating Pressure at Low Side (PSI)		175	175	175	175	175
Sound Pressure Level dB (A) (H/L)		56/54	56/54	56/54	56/54	56/54
Sound Power Level dB (A) (H/L)		66/64	66/64	66/64	66/64	66/64
Dimensions of Outdoor Unit (W x H x D) (Inches)		33.3 x 27.0 x 11.8	37.4 X 27.5 X 15.5	37.2 X 27.6 X 15.75	37.4 X 27.5 X 15.5	42.25 X 43.5 X 17.5
Dimensions of Package (W x H x D) (Inches)		39.1 x 29.5 x 16.9	40.6 X 29.5 X 16.5	40.5 X 29.5 X 18.0	40.6 X 29.5 X 16.5	46.0 X 48.6 X 19.4
Net Weight /Gross Weight (LBs)		115 / 126	150 / 161	165 / 176	165 / 176	225 / 248
Refrigerant /Factory Pre-Charge for 25' (LBs)		R410A / 2.97	R410A / 4.84	R410A / 4.84	R410A / 4.84	R410A / 10.6
Loading Quantity	20' Container	87	80	80	80	50
	40' Container	183	170	170	170	100
	40' High Cube Container	183	170	170	170	100

RECOMMENDED TOOLS FOR INSTALLATION



1) Mounting Indoor & Outdoor Units and Running Piping/Wiring

- Ruler (Not Shown)
Stud-Finder
Dry-Wall Saw
Electric Drill
3" Hole Saw
Drill Extension
Hammer Drill and Bit (Not Shown)
Measuring Tape
Level
Flash Light
Screw Driver (Phillips and Flat)
Hammer
Knife
Scissors
Goggled Glass
Mask
Gloves
Ladder

2) Refrigeration Related Work

- Individual Wrench Set (Use Two at One Time)
Flare-Nut Tool Set (Not Shown)
Hex Head Allen Wrench Sets (Metric and Imperial)
Brazing Rods and Brazing Torch
Outfit for AC Application (Not Shown)
Brazing Flux
Nitrogen Cylinder for Positive Pressure Leakage Check (Not Shown)
Soap Bubble for Positive Pressure Leakage Check (Not Shown)
Vacuum Pump for Negative Pressure Leakage Check
Helium Refrigerant Minor Leakage Check (Not Shown)
Manifold

3) Electrical Related Installation

- Wire Cutter
Wire Stripper
Sharp Plier
Cable Ties
Black Tape for Electrical Use
lectrical Meter

4) Trial Running Units and Inspection

- Clamp Meter (Not Shown)
Manifold
Infra Thermometer (Not Shown)

HANDLING

- ⚠ After having removed the packaging, check that the contents are intact and complete.

⚠ The outdoor unit must always be kept upright.
- ⚠ Handling must be done by suitably equipped qualified technical personnel using equipment that is suitable for the weight of the appliance.

INSTALLING OUTDOOR UNIT

LOCATION

- ⚠ Use bolts to secure the unit to a flat, solid floor. When mounting the unit on a wall or the roof, make sure the support is firmly secured so that it cannot move in the event of intense vibrations or a strong wind.

⚠ Do not install the outdoor unit in pits or air vents.

⚠ Do not install the outdoor unit where it is exposed to direct sunlight.

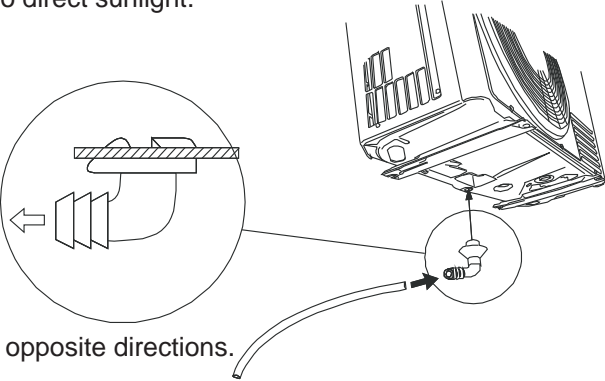
INSTALLING THE PIPES

- ⚠ Use suitable connecting pipes and equipment for the refrigerant R410A.

⚠ The refrigerant pipes must not exceed the maximum lengths given in the technical data table.

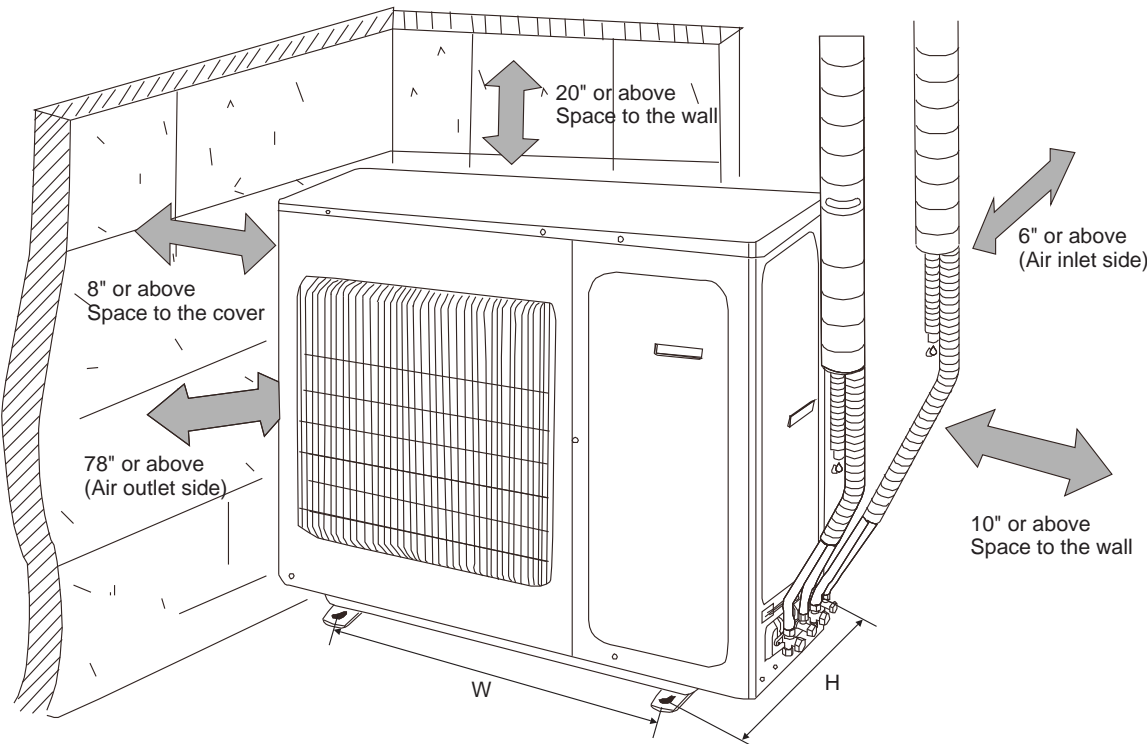
⚠ Lag all the refrigerant pipes and joints.

⚠ Tighten the connections using two wrenches working in opposite directions.



Install the drain fitting and the drain hose (for model with heat pump only)
Condensation is produced and flows from the outdoor unit when the appliance is operating in the heating mode. In order not to disturb neighbors and to respect the environment, install a drain fitting and a drain hose to channel the condensate water. Install the drain fitting and rubber washer on the outdoor unit chassis and connect a drain hose to it as shown in the figure.

INSTALLATION CLEARANCE



INSTALLATION CLEARANCE

Model		WMMS-21CH-V2B(59)(2) (1 to 2) WMMS-30CH-V2B(59)(2) (1 to 2)	WMMS-24CH-V2B(59)(2) (1 to 3) WMMS-36CH-V2B(59)(2) (1 to 3)	WMMS-42CH-V2B(59)(2) (1 to 4)	WMMS-48CH-V2B(59)(2) (1 to 4)	WMMS-60CH-V2B(59)(2) (1 to 5)
B	Inch	21.7	22.75	22.75	22.5	24.75
E	Inch	13.5	13.5	13.5	13.5	16.9

⚠ WARNING

- ⚠ The installation must be done by trained and qualified service personnel with reliability according to this manual.

⚠ Contact service center if you have any questions, be for or during or after installation, in order to avoid the malfunction or failure due to unprofessional installation.
- ⚠ Picking up and moving the units, you must be guided by trained and qualified personal, with proper tool.

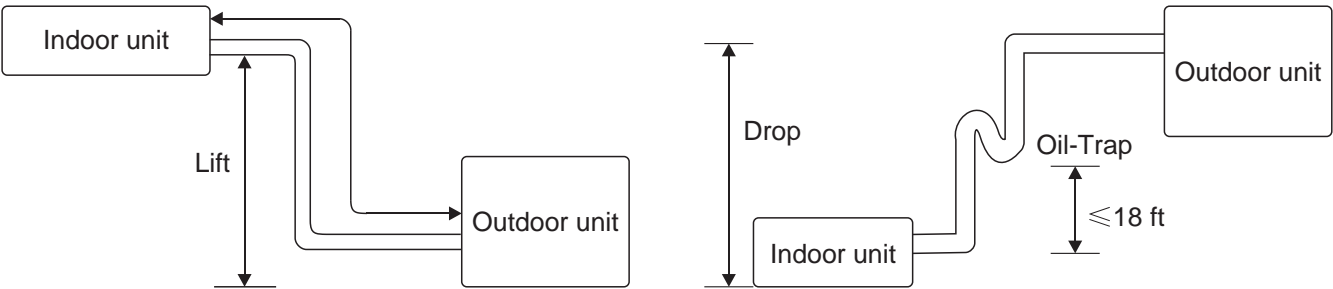
⚠ Ensure that the recommended clearance is left around the unit, for proper installation, operation and service in the future..

INSTALLATION POSITIONS FOR OUTDOOR UNIT

- * To be installed at the position where the air delivered from the unit can reach every corner of the room.
- * To avoid being affected by the outdoor air.
- * To avoid blockage to the air inlet or outlet of the unit.
- * To avoid too much oil smoke or steam.
- * To avoid possible generation, inflow, lingering or leakage of flammable gases.
- * To avoid high-frequency facilities (such as high frequency arc welders, etc.).
- * To avoid the places where acid solutions are frequently used.
- * To avoid the places where some special sprayers (sulfides) are frequently used.
- * Not to install on top of the musical instruments, TV, computer etc. valuable appliance.
- * Not to install a fire alarming device near the air outlet of the unit (during operation, the fire alarm device might be erroneously triggered by the warm air from the unit).

HEIGHT LIMITS OF INDOOR AND OUTDOOR UNITS

- * Either the indoor unit or the outdoor unit can be higher, but the height difference must comply the stated requirements.
- * Try to reduce the bending of the piping line as much as possible so as to avoid possible negative impacts upon the performances of the units.
- * Make P-trap if elevation drop difference is more than 25" , as illustrated below.



Refrigerant Pipe Min/Max. Length, Rise and Drop Height

1,000 Btu/h	Min. Length (Ft.)	Max. Length (Ft.)	Max. Rise Height (Ft.)	Max. Drop Height (Ft.)
09-12	15	50	20	28
18-24	15	75	25	35
30-36	15	100	35	50



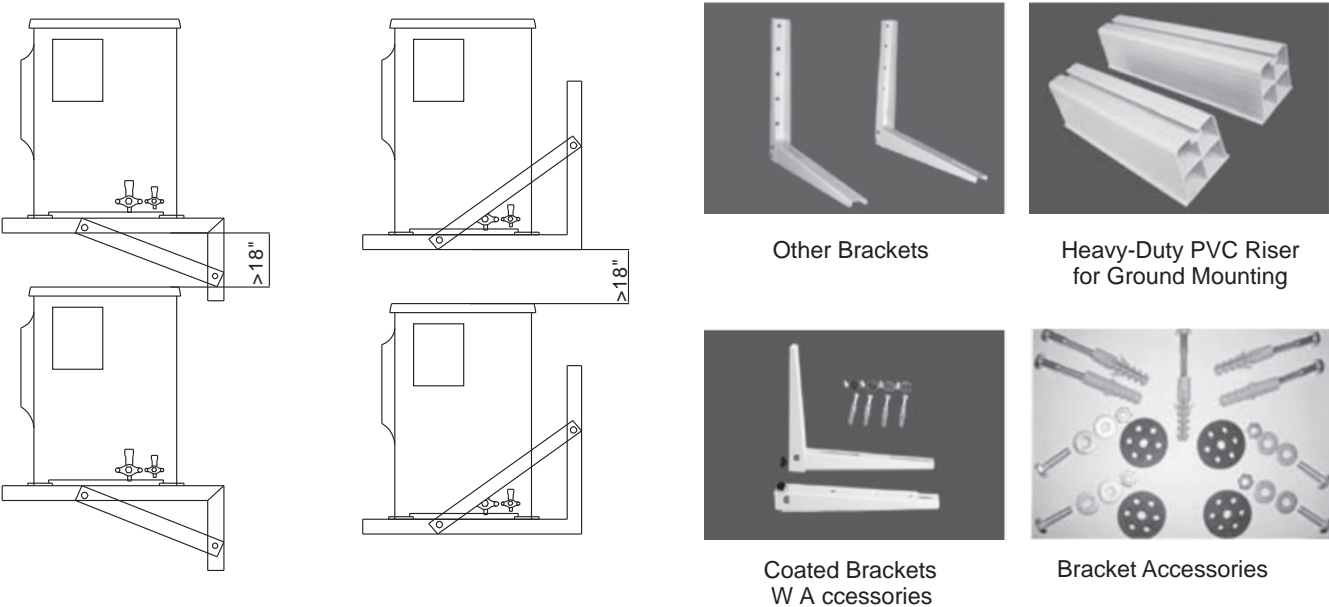
INSTALLATION-OUTDOOR UNIT

INSTALL OUTDOOR UNIT

Strongly suggest to install the outdoor unit above the ground either on platform or brackets as shown below.

Heat pump unit must be lift up from ground level, since condensate must be drained out of the drain pan of the condensing unit; otherwise, condensate may be iced and built up to damage the condensing unit.

Suggest to use YMGI-provided brackets and condensate drainage fitting accessories.



(Actual unit/parts or installation may look differently from the illustrated)

INSTALLATION & PICTURES-WALL MOUNT BRACKET FOR OUTDOOR UNIT(S)
(PART VARIES UPON MODELS/AVAILABILITY)

- Select a secured location where the outdoor unit will be installed properly.
- Orient the unit rear side (intake grill) towards wall and front side (discharge grill) away from wall.
- For ground installation, use factory-provided riser and accessories. Not to bolt unit feet directly onto ground. Riser or brackets shall be levelled at outdoor unit foot surfaces. Secure unit foot by tightening bolts, nuts and anti-vibration pads.
- For wall mount installation, use factory-provided brackets, anchors and accessories.

WIRING OUTDOOR UNIT

CONNECT WIRING BETWEEN OUTDOOR UNIT AND INDOOR UNIT

- * Check the nameplate for rated electrical data. Connect unit to the correct electrical power source.
- * Select power wire of proper type and size. Suggest to use UL approved 105°C/221°F multi-strand copper wire for outdoor use. Refer to the following tables, for proper selection of wire gauge, size and circuit breaker.

OUTDOOR WIRING: OUTDOOR-INDOOR UNIT & DISCONNECT SWITCH
BOX/CIRCUIT BREAKER/FUSE

- * Remove the wiring diagram cover where also the handle for moving unit is located.
- * Follow the wiring diagrams on the unit or the wiring diagram manual that comes with the indoor unit to get familiar with wiring and make sure nothing is made wrong. If there is any discrepancy, always use the one put in the units.
- * Connect wires between indoor unit and outdoor unit-power wire from outdoor to Indoor, control wires from Indoor unit to outdoor unit. Pass wire through certified wire pipes, harnesses and knockouts. Enough length shall be left for future service. Only copper wire is allowed.

WIRING OUTDOOR UNIT

Strictly follow NEC or state or local codes to select wires, circuit breaker, conduits and to perform installation work.

Bring in line-voltage power input wires from circuit breaker to line-voltage wire terminal block at outdoor unit. Pass through certified wire pipes, harnesses and knockouts. Enough length shall be left for future service. Only copper wire is allowed.



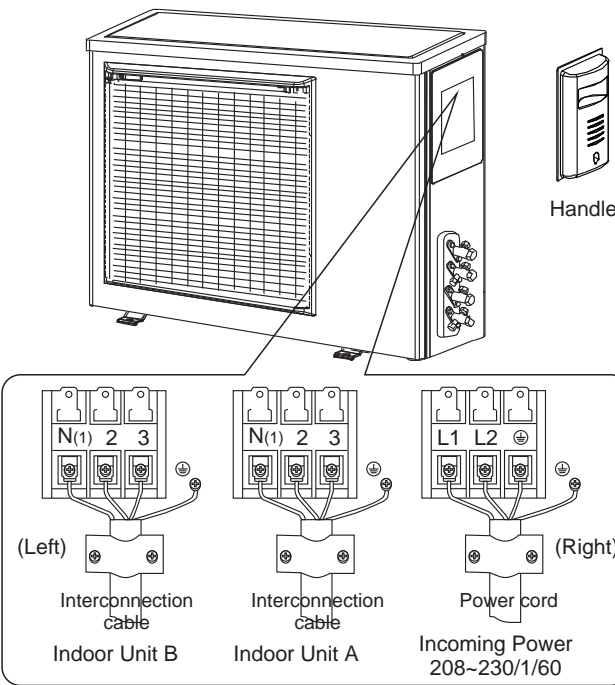
PIPING AND WIRING SIZES-UNITS MADE AFTER 09/2012

Unit	Connection Copper Pipe Sizes	Min/Max.Length +/- Elevation	Wires from Outdoor to Each Indoor Unit	Mini. Wire Size Outdoor-Each Indoor Unit	HVAC Type Circuit Breaker
21/30CH	2*(1/4+3/8")	15/30/30/15	N(1)/2/3/G	16AWG	30AMP
24/36CH	3*(1/4+3/8")	15/75/30/15	N(1)/2/3/G	16AWG	30AMP
42CH	4*(1/4+3/8")	15/30/30/15	N(1)/2/3/G	16AWG	40AMP
48CH	4*(1/4+3/8")	15/30/30/15	N(1)/2/3/G	16AWG	40AMP
60CH	2*(1/4+3/8")+2*(1/4+1/2") +(1/4+5/8")	15/30/30/15	N(1)/2/3/G	16AWG	50AMP

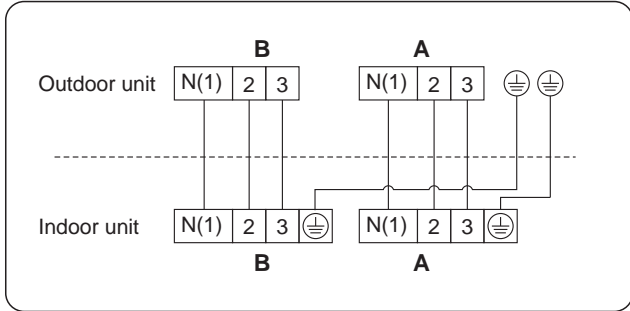
ELECTRICAL CONNECTIONS

WMMS-21CH-V2B(59)(2) (1 to 2) / WMMS-30CH-V2B(59)(2) (1 to 2)

- 1) Remove the handle at the right side plate of the outdoor unit (one screw).
- 2) Remove the cable clamp, connect the power connection cable with the terminal at the row of connection and fix the connection. The fitting line distributing must be consistent with the indoor unit. terminal of line bank. Wiring should meet that of indoor unit.
- 3) Fix power connection wire by wire clamp.
- 4) Ensure wire has been fastened well.
- 5) Replace handle when done.



- ⚠ An all-pole disconnection switch having a contact separation of at least 1/10" all poles should be connected in with wires that are secured to the unit meta structure.
- ⚠ Wrong wire connection may cause malfunction of some electric components. After fixing cable, ensure that leads between connection to fixed point are well separated..
- ⚠ The connection pipes and the connection wiring of the unit A and unit B must be corresponding to each other respectively.
- ⚠ The system shall be installed in accordance with NEC.

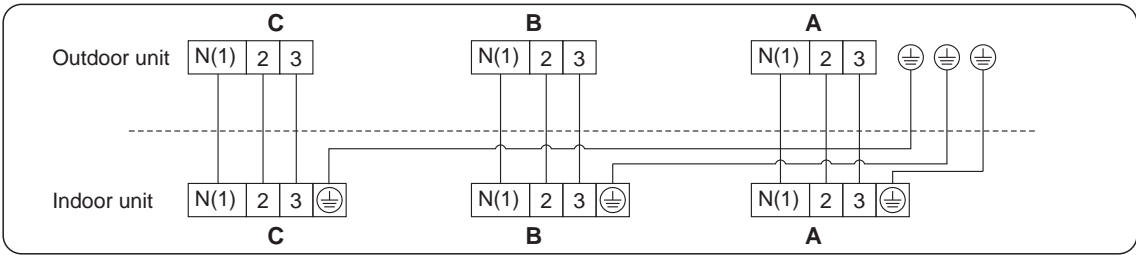
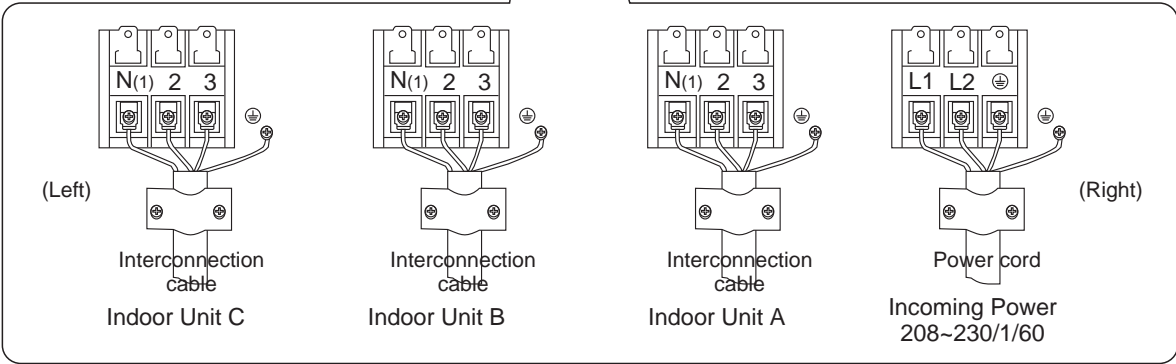
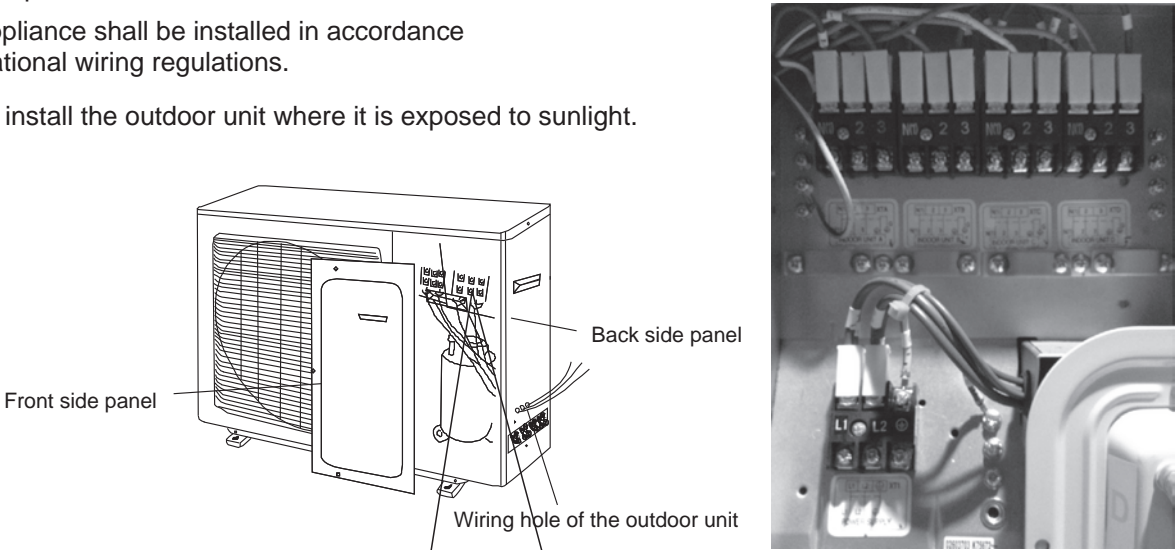


ELECTRICAL CONNECTIONS

WMMS-24CH-V2B(59)(2) (1 to 3) / WMMS-36CH-V2B(59)(2) (1 to 3)

- 1) Disassemble the front side plate on the outdoor unit front side plate.(4pc screw).
- 2) Remove the cable clamp, connect the power connection cable with the terminal at the row of connection and fix the connection. The fitting line distributing must be consistent with the indoor unit. terminal of line bank. wiring should meet that of indoor unit.
- 3) Fix power connection wire by wire clamp.
- 4) Ensure wire has been fixed well.
- 5) Install the front side plate.

- ⚠ An all-pole disconnection switch having a contact separation of at least 0.12" in all pole should be connected in fixed wiring.
- ⚠ Wrong wire connection may cause malfunction of some electric components. After fixing cable, ensure that leads between connection to fixed point have some space.
- ⚠ The connection pipes and the connecting wirings of the unit A and unit B must be corresponding to each other respective.
- ⚠ The appliance shall be installed in accordance with national wiring regulations.
- ⚠ Do not install the outdoor unit where it is exposed to sunlight.

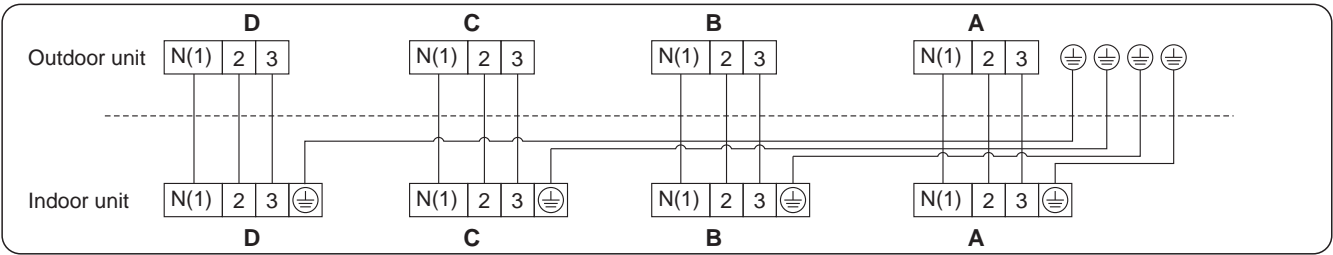
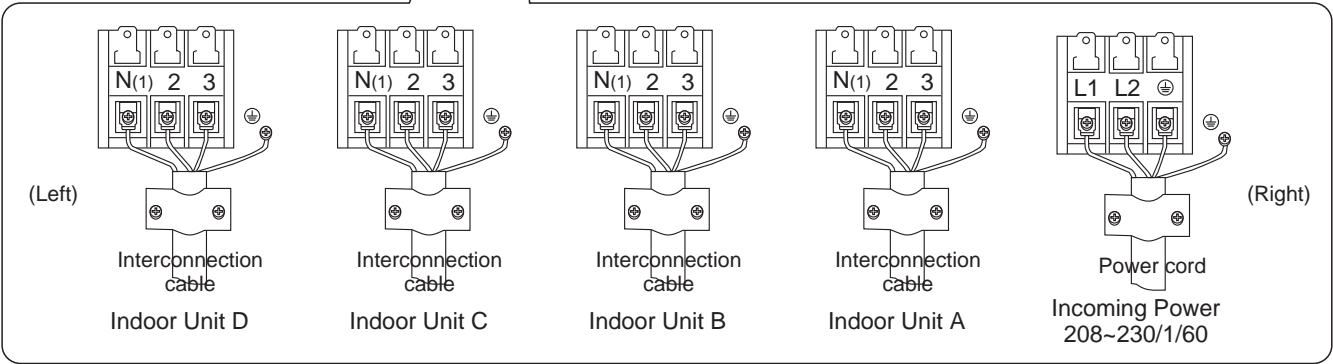
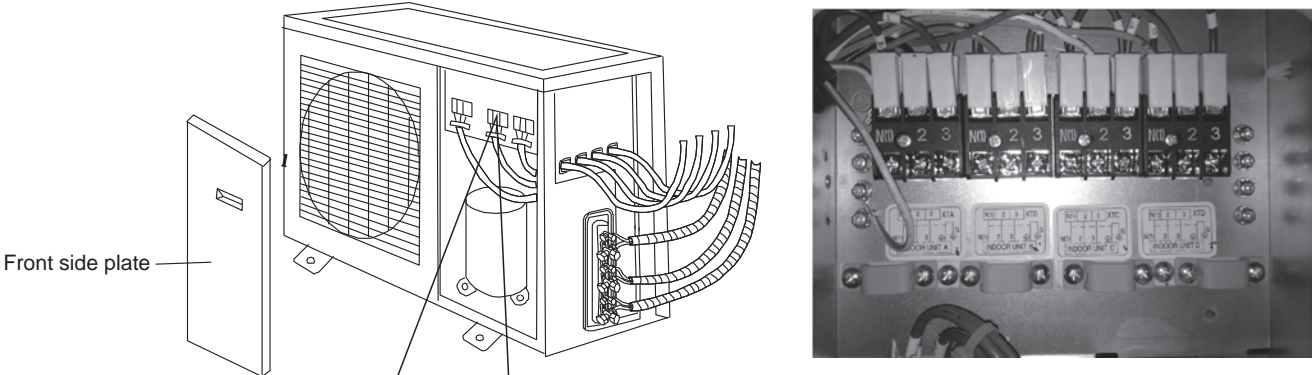


ELECTRICAL CONNECTIONS

WMMS-42CH-V2B(59)(2) (1 to 4) / WMMS-48CH-V2B(59)(2) (1 to 4)

- 1) Remove the handle at the right side plate of the outdoor unit (one screw).
- 2) Remove the cable clamp, connect the power connection cable with the terminal at the row of connection and fix the connection. The fitting line distributing must be consistent with the indoor unit. terminal of line bank. Wiring should meet that of indoor unit.
- 3) Fix power connection wire by wire clamp.
- 4) Ensure wire has been fixed well.
- 5) Install the handle.

- ⚠ An all-pole disconnection switch having a contact separation of at least 0.12" in all pole should be connected in fixed wiring.
- ⚠ Wrong wire connection may cause malfunction of some electric components. After fixing cable, ensure that leads between connection to fixed point have some space.
- ⚠ The connection pipes and the connecting wiring of the unit A ,unit B and unit C must be corresponding to eachother respective.
- ⚠ The appliance shall be installed in accordance with national wiring regulations.
- ⚠ Do not install the outdoor unit where it is exposed to the sunlight.

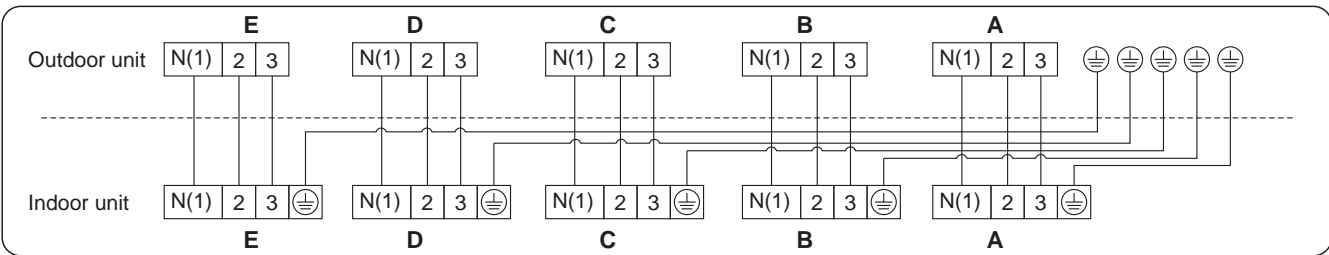
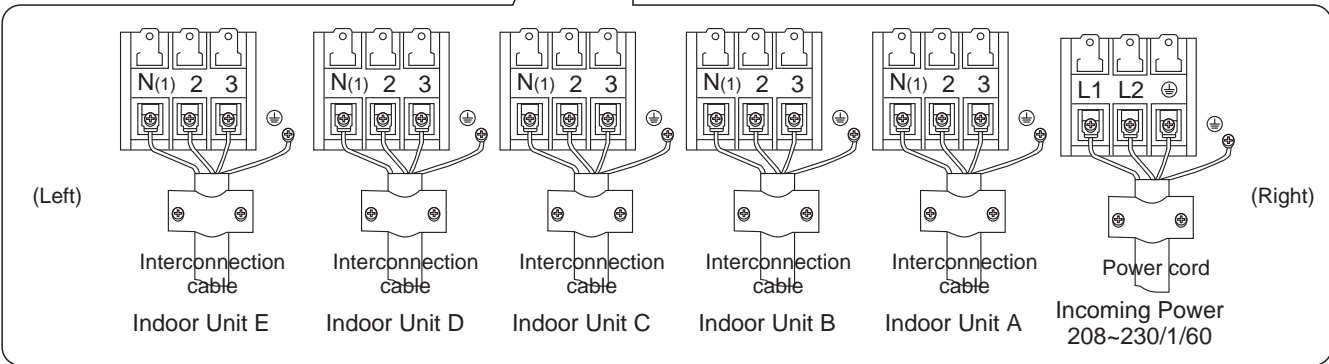
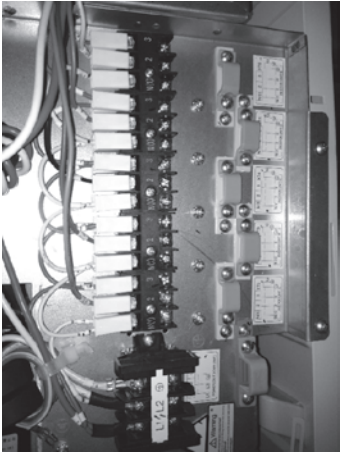
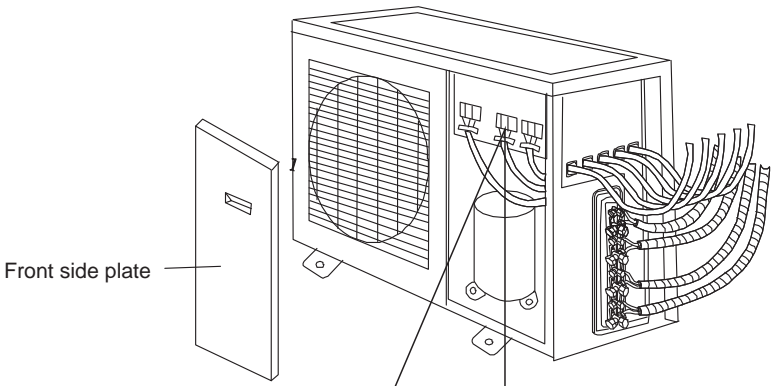


ELECTRICAL CONNECTIONS

WMMS-60CH-V2B(59)(2) (1 to 5)

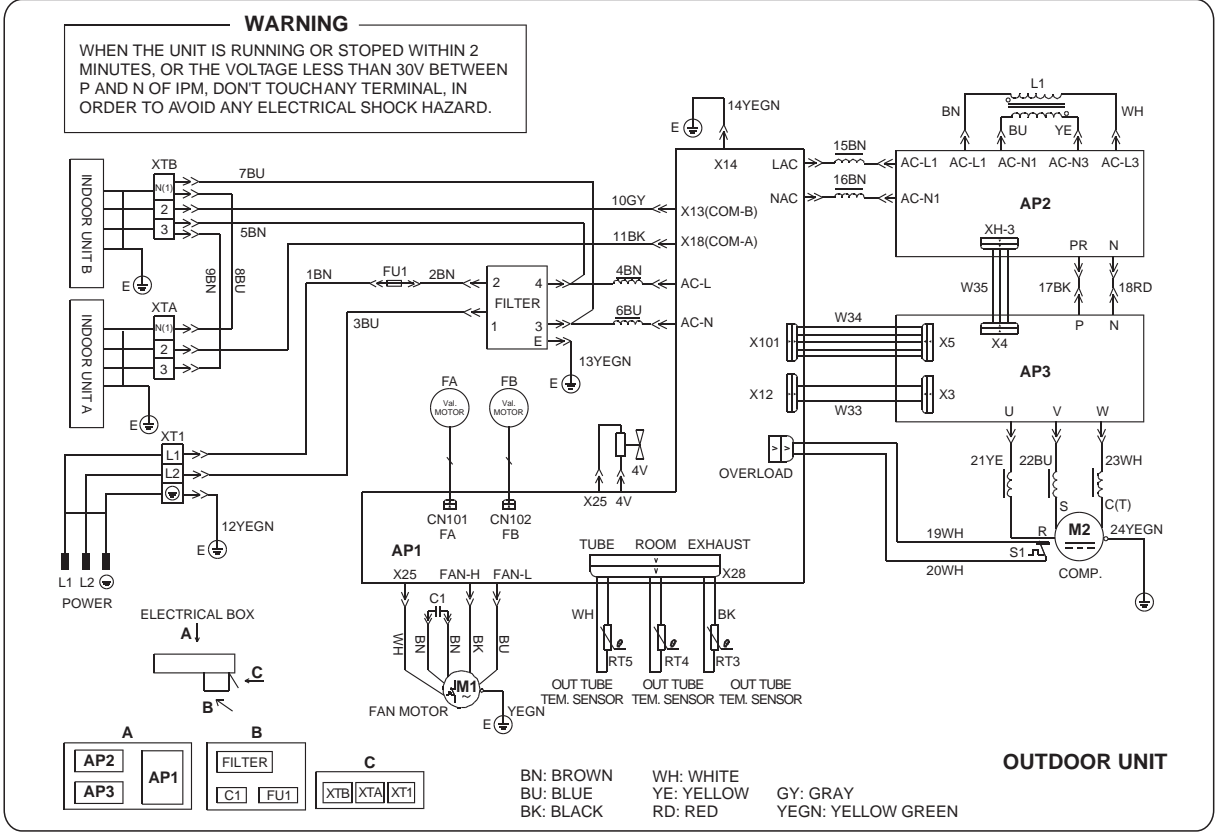
- 1) Remove the handle at the right side plate of the outdoor unit (one screw).
- 2) Remove the cable clamp, connect the power connection cable with the terminal at the row of connection and fix the connection. The fitting line distributing must be consistent with the indoor unit. terminal of line bank.
Wiring should meet that of indoor unit.
- 3) Fix power connection wire by wire clamp.
- 4) Ensure wire has been fixed well.
- 5) Install the handle.

- ⚠ An all-pole disconnection switch having a contact separation of at least 0.12" in all pole should be connected in fixed wiring.
- ⚠ Wrong wire connection may cause malfunction of some electric components. After fixing cable, ensure that leads between connection to fixed point have some space.
- ⚠ The connection pipes and the connecting wiring of the unit A, unit B, unit C and unit D must be corresponding to eachother respective.
- ⚠ The appliance shall be installed in accordance with national wiring regulations.
- ⚠ Do not install the outdoor unit where it is exposed to the sunlight.

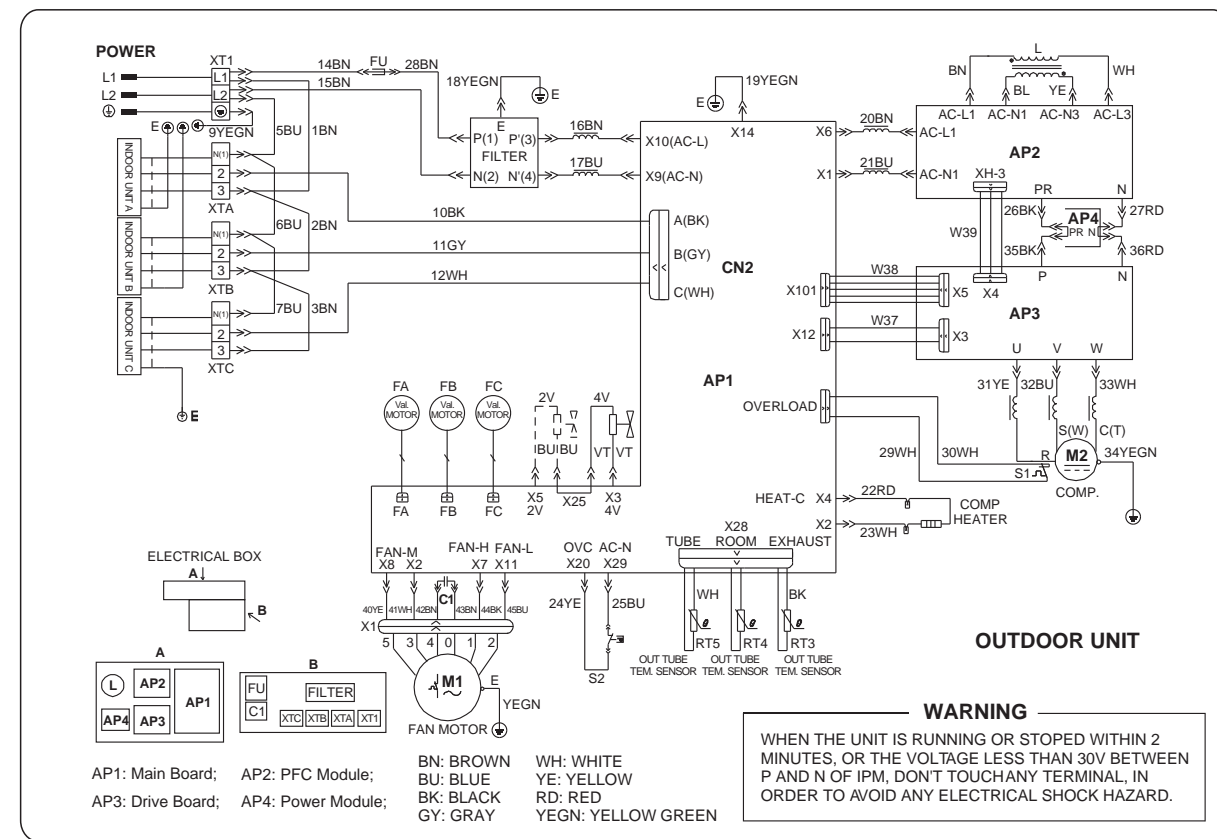


WIRING DIAGRAMS

WMMS-21CH-V2B(59)(2) (1 to 2) / WMMS-30CH-V2B(59)(2) (1 to 2)

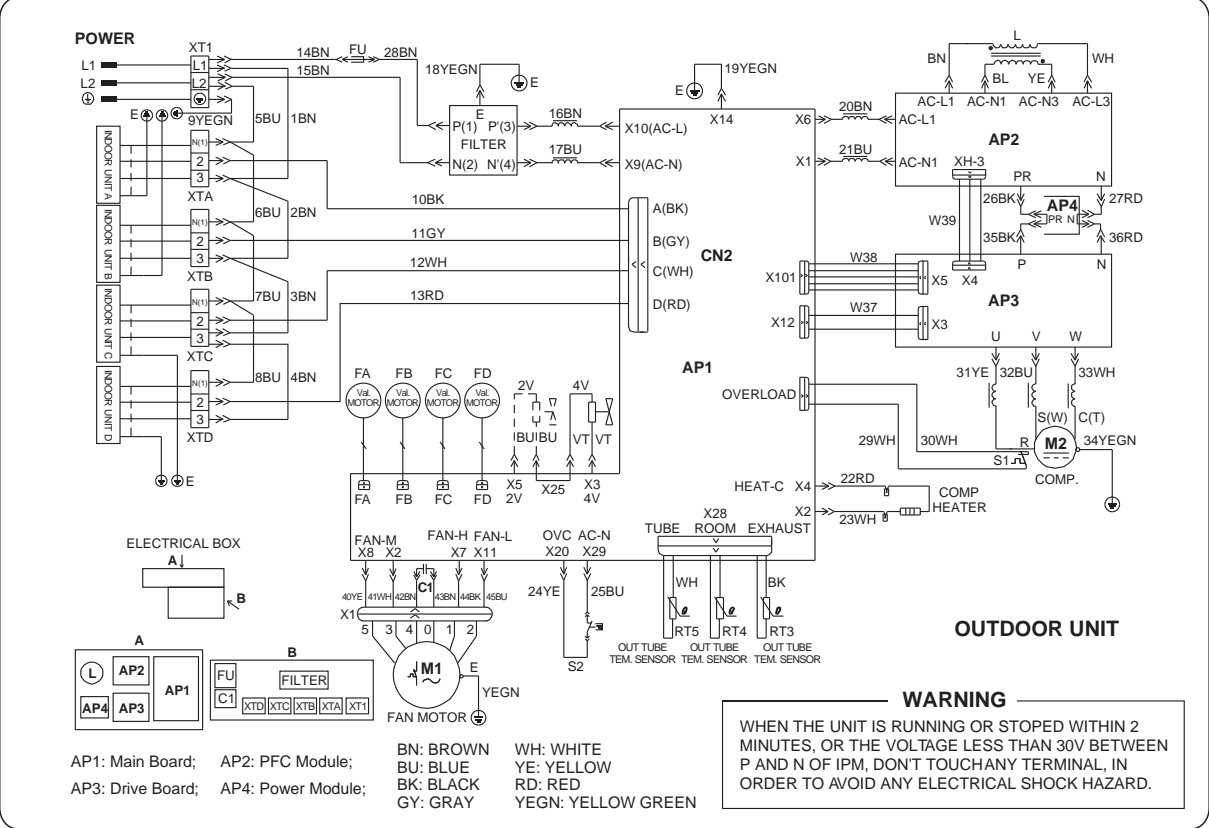


WMMS-24CH-V2B(59)(2) (1 to 3) / WMMS-36CH-V2B(59)(2) (1 to 3)

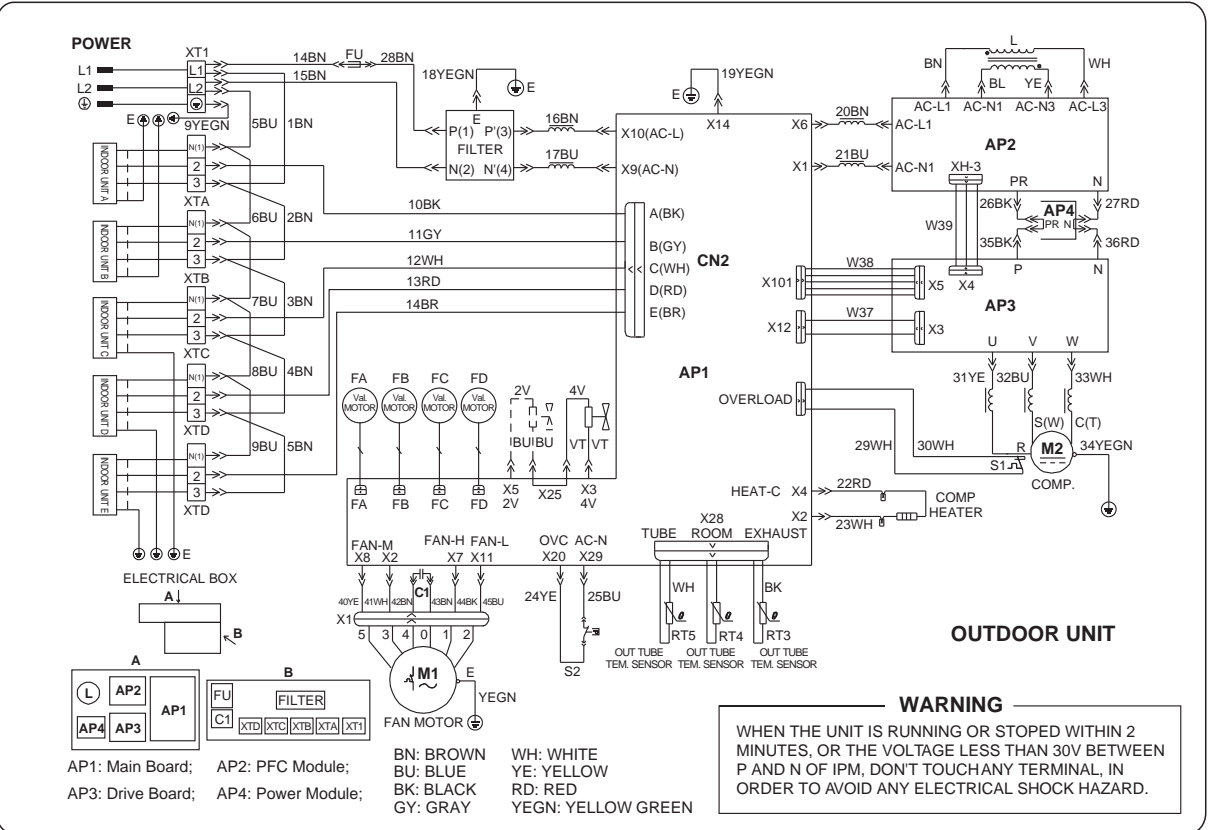


WIRING DIAGRAMS

WMMS-42CH-V2B(59)(2) (1 to 4) / WMMS-48CH-V2B(59)(2) (1 to 4)

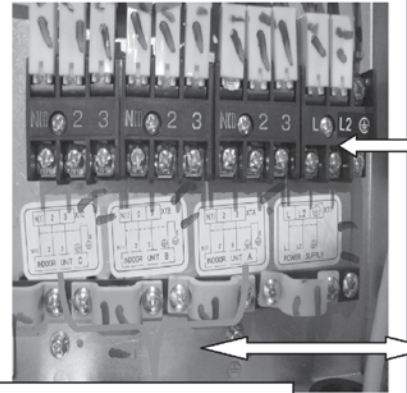


WMMS-60CH-V2B(59)(2) (1 to 5)



NOT TO CROSS-WIRING & NOT TO CROSS-PIPING

Not to Cross-Wiring, Not to Cross-Piping Between Any Two Zones
Mini Split-DC Inverter Multiple Zones-(59 Series)-(A-A B-B C-C D-D)



Power Cable from Disconnect Switch Box to Connect to Outdoor Unit Terminal Block: L1/L2/G 208-230/1/60

Wires to Go Between Each Indoor Unit and the Outdoor Unit, Connects at N(1)/2/3, One-on-one Match: A-A, B-B, C-C, D-D, Whichever available

ID-OD Wire Connection Terminal Blocks D, C, B, A



Piping: Need to ensure the liquid/gas lines from indoor unit A are connected to the valves on outdoor unit marked A/A, respectively.

Also, make sure liquid/gas lines from indoor unit B are connected to the valves on outdoor unit marked B/B, respectively.

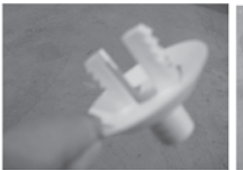
... Same matching on C-C, Whichever D-D, Available

Warning: Since there are multiple electronic expansion valves built inside the outdoor unit, with one (1) for each indoor unit, wiring and piping for each indoor unit, need to match with the corresponding wiring terminals and valves for that specific indoor unit. NOT to Cross Pipe, Not to Cross Wire, between any two indoor units. All manufacturer warranty will be voided in case of any cross-piping or cross-wiring installation. Manufacturer or Distributor(s) WILL NOT be responsible for any direct or indirect damage/loss caused by such prohibited installation.

Negative Consequences of Cross-Wiring/Piping between Any Two Zones:

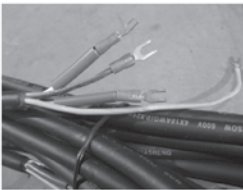
1. The other compressor may work to pump refrigerant into another connected indoor unit, when one indoor unit is called for either cooling or heating.
2. Will not have any conditioned air blown out of the indoor unit you are calling for either cooling or heating.
3. May freeze (at cooling) or heat up (at heating) the other indoor unit;
4. May damage compressors or other refrigeration components;
5. May cause electrical surge;
6. May damage the whole unit;
7. May cause other consequential damages;
8. Will void manufacturer warranty;
9. The installers MUST take full responsibilities by doing so.

Important: Must follow the piping length suggestion listed on the product specification sheet, and/or installation manual. Must thoroughly check all functions at each system first, before putting any two systems, three systems, four systems, and so on, together to run.



This 3/8"-1/4" reducer, may be needed to connect ceiling ID, or 18K wall mount ID units

This white fitting can be connected to the bottom of outdoor unit base pan, of heat pump models, if you would like to drain the condensate, which will be generated during heat pump defrost cycle, to somewhere you designate to. (Attention: Must install the Heat Pump outdoor unit onto a foot riser (RIST) or bracket (BRKT), so that the base pan can be at least 4 inches above the ground level, and is clear from any blockage, and can keep from possible ice to build up, in cold days.

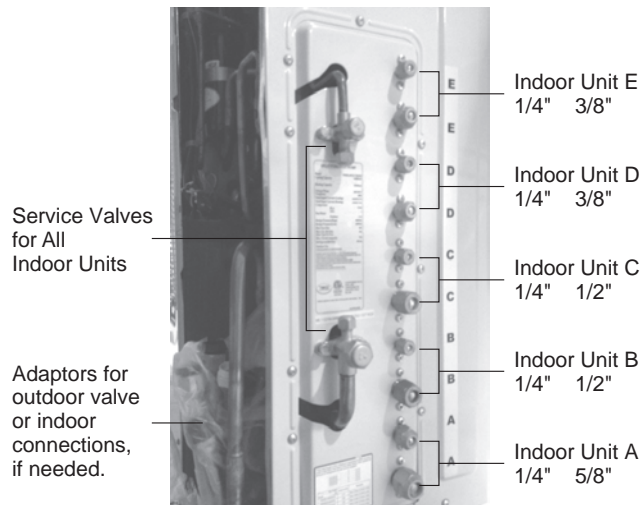


Factory Wiring Kit: Blue for N(1) Black for 2, Brown for 3 Green goes to metal ground screw.



May put these wire grommet onto the knock-out on the cabinet.

NOT TO CROSS-WIRING & NOT TO CROSS-PIPING



⚠ WARNING

Not to cross-wiring, Not to cross-wiring between any 2+ zones.

CONNECT REFRIGERANT PIPES Seal Copper Line Set/Wire Cable/Drain Hose Line Combination:

- * Use factory-recommended components, as briefly illustrated below.
- * Cover line set in a sequence, either from indoor to outdoor, or the other way.
- * Secure line set covers onto the wall using factory-recommended accessories.

INSTALLATION OF ACCESSORIES

LINE SET COVERS

⚠ CAUTION Not to damage line sets.



OUTDOOR UNIT FOOT RISER OR BRACKETS BRKT-XXXX-SC1

- * Made of steel.
- * Coated with weatherproof polyester powder.

Model	Size(Inch)		Capacity	
	A	B	LBs	Btu/h
BRKT-0918-SC1	17.7	15.4	320	09K-18K
BRKT-1860-SC1	21.7	18.3	360	18K-60K

BRKT-XXXX-ST1

- * Made of stainless steel.

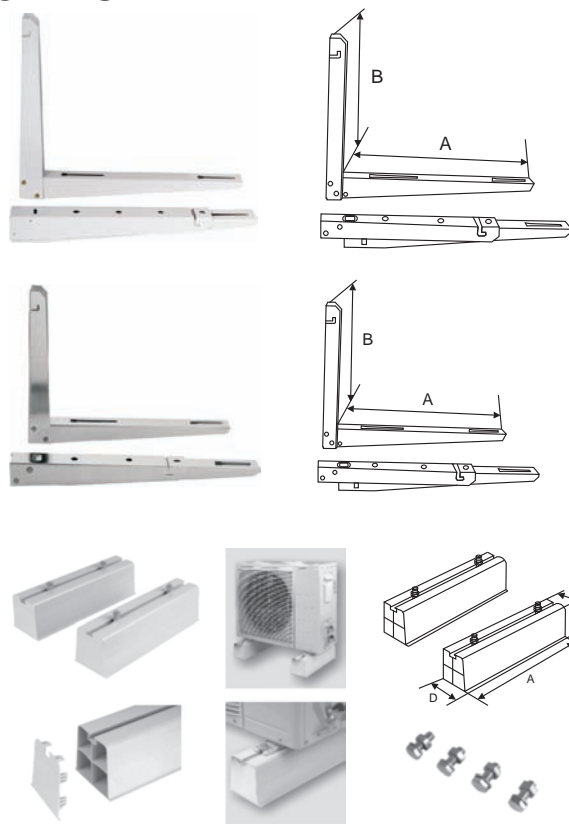
Model	Size(Inch)		Capacity	
	A	B	LBs	Btu/h
BRKT-0918-ST1	17.7	15.4	320	09K-18K
BRKT-1860-ST1	21.7	18.3	360	18K-60K

RIST-XXXX-PVC Foot Riser

Accessories: End Caps (Optional)

- * Shock-proof PVC, Weatherproof & UV resistant.
- * Supplied with fastening screws and anchor bolts.
- * Easy to install.
- * The "honeycomb" structure acts as an anti-vibration & humming absorption for a quite operation.

Model	Size(Inch)				Capacity	
	A	B	C	D	LBs	Btu/h
RIST-0918-PVC	14.2	3.7	3.1	4.1	220	09K-18K
RIST-1860-PVC	17.7	3.7	3.1	4.1	260	18K-60K

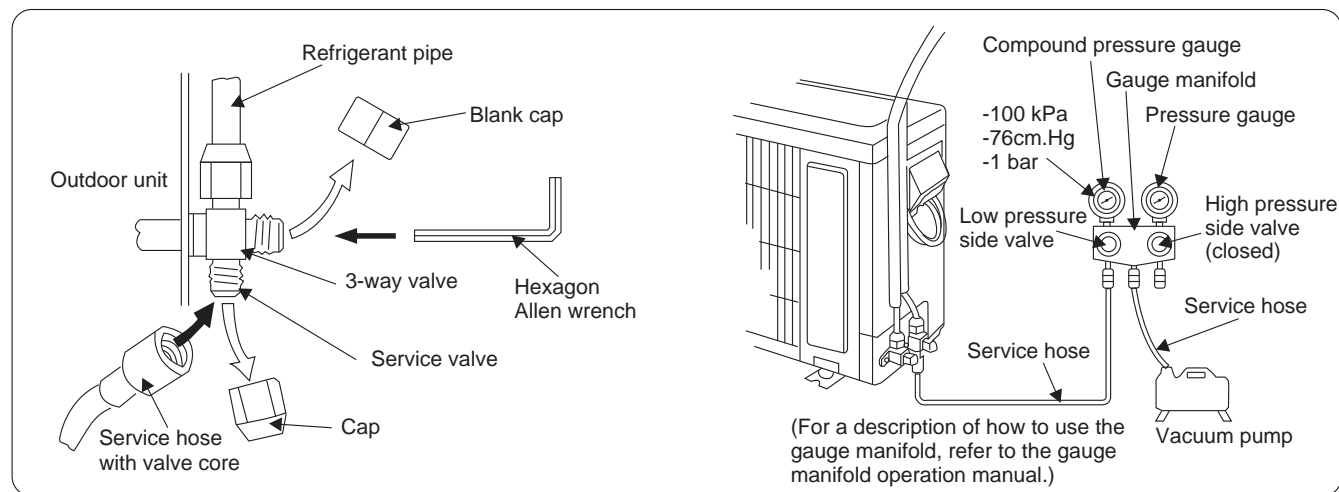


VACUUM AND LEAKAGE CHECK

VACUUM REFRIGERANT PIPES

Evacuate the pipes between indoor and outdoor units, using vacuum pump and manifold/gauge set, to a minimum of 500 microns (service valves remain front seated). Hold for 30 minutes to check if the vacuum level is maintained. Using dry nitrogen or other leakage detection tool for leak checking. Be certain there is no pressure in the system when repairing a leak.

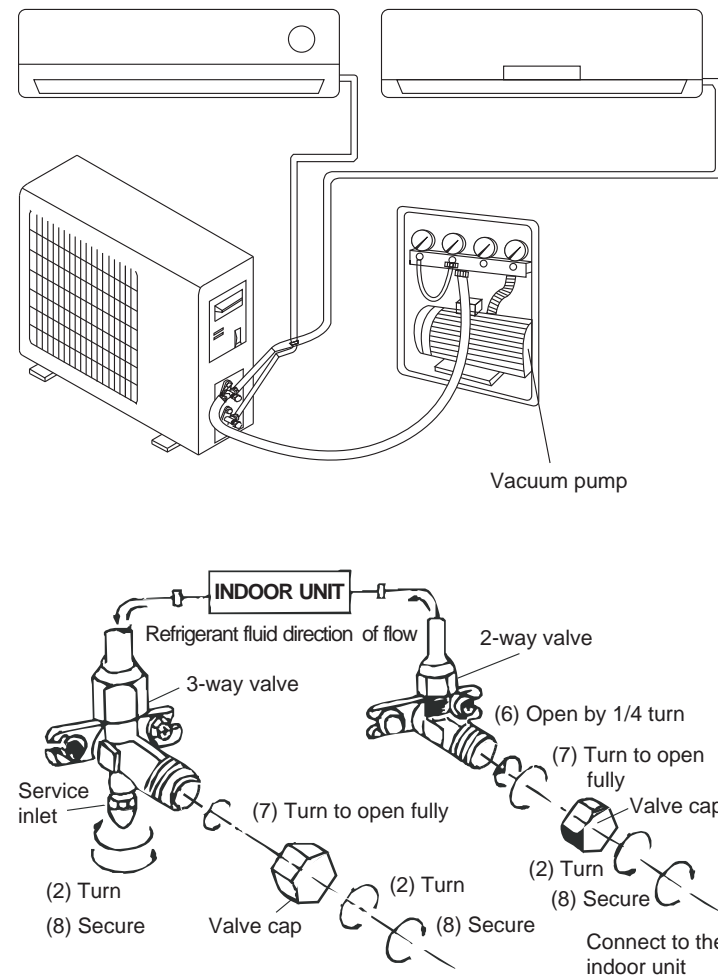
Vacuum and Check Leakage before Releasing Refrigerant from Outdoor Unit to Indoor Unit



VACUUM

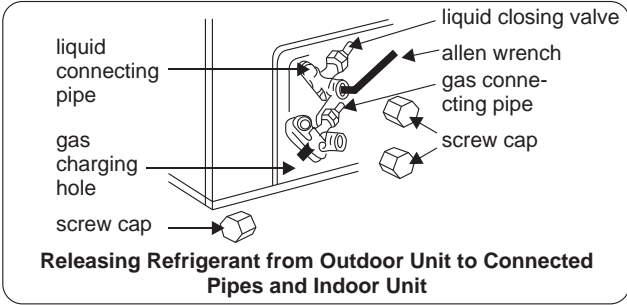
Humid air left inside the refrigerant circuit can cause compressor malfunction and failure. After having connected the indoor and outdoor units, the air and humidity from the refrigerant circuit using a vacuum pump.

- 1) Unscrew and remove the caps from the 2-way and 3-way valves.
- 2) Unscrew and remove the cap from the service valve.
- 3) Connect the vacuum pump hose to the service valve.
- 4) Operate the vacuum pump for 10-15 minutes until an absolute vacuum of 500 micron has been reached.
- 5) With the vacuum pump still in operation, close the low-pressure knob on the vacuum pump coupling. Stop the vacuum pump.
- 6) Open the 2-way valve by 1/4 turn and then close it after 10 seconds. Check all the joints for leaks using liquid soap or an electronic leak device.
- 7) Turn the body of the 2-way and 3-way valves. Disconnect the vacuum pump hose.
- 8) Replace and tighten all the caps on the valves.



RELEASE REFRIGERANT FROM OUTDOOR TO THE INDOOR UNIT

Unit is pre-charged with refrigerant good for 25' of connection tubes. If vacuum is held for about 30 minutes and no leak is found, first back-seat the liquid (smaller) service valve by Allen Wrench (hex head) slowly to release pre-charged refrigerant from the condensing unit into the connection pipes and indoor unit. If no abnormal things are found, fully open liquid (smaller) and gas (bigger) service valves. Always replace and tighten the caps onto service valves.



SYSTEM INSPECTION AND TRIAL RUNNING

CHECK SYSTEM THOROUGHLY

Check system thoroughly to make sure the unit is ready for trial running: check wires and pipes and air intake and discharge and power and thermostat and others necessary components.

ADJUST REFRIGERANT-GUIDELINE

Right amount of refrigerant is very important. It is one of the basics to ensure unit a safe operation over time. Normally single zone outdoor unit is pre-charged with refrigerant for 25ft inter-connecting copper (liquid) line. Multiple zone outdoor unit is pre-charged for various length of copper (liquid) lines of allowed quantity of indoor units, following specs. or engineering submittal. For single zone unit or multiple zone multiple compressor unit, normally the outdoor unit is pre-charged for 25ft line sets. If the copper line is longer or shorter than 25ft, need to add or deduct refrigerant, following general rule of thumb for rough adjustment: 1/4" liquid line unit: 0.3 Oz/ft; 3/8" liquid line unit: 0.4 OZ/ft; 1/2" liquid line unit: 1.2 OZ/ft. For multiple zone one compressor unit, if the copper line is longer or shorter than the length at which pre-charged refrigerant is good for, as listed in the engineering submittal or related labels or tables, need to add or deduct refrigerant, following 0.23 OZ/ft rule of thumb for rough adjustment. In all situations, the minimum copper line (liquid or gas) length for each indoor unit is 15ft. For a better adjustment, may combine above guideline with the indoor or outdoor (ambient) temperature-refrigerant pressure chart, or generally 8-12F super-heat method.

PRESSURE CHECKING

System pressure checking should be a must-do job during trial running of initial installation, and compressor/refrigerant-related trouble-shooting. It is a more accurate refrigerant adjusting method than rough refrigerant addition or deduction guideline shown above. In some cases, if the service valve on unit is 5/16" and your service valve connection is 1/4", need to use a 5/16" -1/4" adaptor so that you can connect to your manifold. Need to pay attention to use the right manifold that is rated for the refrigerant in the unit, and pay attention to connect to the right hose (blue hose for low pressure, red hose for high pressure, yellow hose for vacuum or charging or deduction). Not recommend to put hose onto service valve while compressor is running. Remove hose quickly and carefully to avoid air suck-in, refrigerant leakage, or any refrigerant-freezing burn. The following curves are only reference for system pressure checking. Actual pressures may vary upon many factors such as inter-connecting pipe length, refrigerant charge / leakage level, elevation difference between indoor unit and outdoor unit, tool calibration, reading error, and so on.

Reference Temperature-Pressure Table (Split Condensing Unit-R410A AC)

Product Series: YMGI Group-Mini Split Version: 01/11/2010

Outdoor Dry-Bulb (F)	15	25	35	50	55	60	67	75	82	90	95	100	105	110	115
Outdoor Dry-Bulb (C)	-9.4	-3.9	1.7	10.0	12.8	15.6	19.4	23.9	27.8	32.2	35.0	37.8	40.6	43.3	46.1
Outdoor Wet-Bulb (F)	13.6	23.0	30.2	42.8	46.9	51.1	59.5	66.6	64.9	71.2	75.0	79.0	82.9	86.9	90.7
Outdoor Wet-Bulb (C)	-10.2	-5	-1.0	6.0	8.3	10.6	15.3	19.2	18.3	21.8	23.9	26.1	28.3	30.5	32.6
Indoor Dry-Bulb	80F (26.7C)														
Indoor Wet-Bulb	67F (19.4C)														
Discharge-PSI/F	74/21.2	84/27.1	105/35.1	115/38.5	125/42.8	130/45.5	140/48.2	146/51.2	156/54.3	166/57.5	175/61.2	180/62.5	186/63.7	189/64.5	191/64.9
Suction-PSI/F	60/46.2	70/53.5	85/55.2	92/55.7	98/56.1	103/56.7	110/56.9	115/57.1	120/57.5	128/57.8	135/57.9	136/58.6	137/59.1	139/59.3	140/59.5
Suggest to Add on Low Ambient Control, If Still in Need of AC for Long Time In Cold Weather. Closely Check/Watch Refrigerant Charge Level.															
Warning: R410A refrigerant bears higher pressures than R22. Only handled by Licensed HVAC technician.															

Reference Temperature-Pressure Table (Split Condensing Unit, R410A-Heat Pump)

Product Series: YMGI Group-Mini Split System Version: 01/11/2010

Outdoor Dry-Bulb (F)	0	5	10	17	25	30	35	40	45	47	55	62
Outdoor Dry-Bulb (C)	-17.8	-15	-12.2	-8.3	-3.9	-1.1	1.7	4.4	7.2	8.3	12.8	16.7
Outdoor Wet-Bulb (F)	-0.8	4.1	8.8	15	22.8	27.5	28.9	36.3	41.0	43.0	50.4	56.5
Outdoor Wet-Bulb (C)	-18.2	-15.5	-12.9	-9.4	-5.1	-2.5	-1.7	2.4	5	6.1	10.2	13.6
Indoor Dry-Bulb	70F (21.1C)											
Indoor Wet-Bulb	60F (15.6C)											
Discharge-PSI/F	260/84	269/90	284.5/95	290/102	296/111	304/128	304/133	330/138	345/142	354/149	400/149	440/176
Suction-PSI/F	246/72	255/78	270/86	278/89	285/92	290/95	310/98	318/100	330/102	340/104	380/107	425/113

CHECK AFTER INSTALLATION AND TEST OPERATION

CHECK AFTER INSTALLATION

Items to be checked	Possible Problems or Consequences
Has the been unit positioned firmly?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling(heating) capacity.
Is heat insulation sufficient?	It may cause unexpected condensate and dripping.
Is drainage pipe tested ?	It may cause leakage or unexpect dripping.
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunction or damage to the part/unit.
Is the electric wiring and piping connection installed correctly and securely?	It may cause electric malfunction or damage to the part/unit.
Has the unit been connected to a secure earth connection?	It may cause electrical leakage.
Is the power cord specified properly per NEC codes ?	It may cause electric malfunction or damage to the part/unit.
Is the air inlet and outlet been cleared?	It may cause insufficient cooling(heating) capacity, and unexpected noise.
Has the refrigerant pressure been checked or refrigerant been adjusted accordingly?	It may generate unexpected noise, freezing pipe, capacity issues, compressor or system damage or even worse.
Has the installing technician filled all the fields in the checklist inside the warranty registration card?	If not filed or not filled completely or correctly, your factory warranty may not be qualified.

TEST OPERATION

1. Before test operation

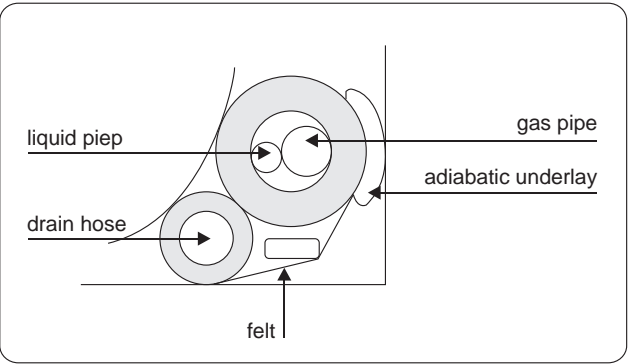
- (1) Do not turn on power before installation is finished completely.
- (2) Electric wires must be connected correctly and securely.
- (3) Cut-off valves of the connection pipes should be back seated/tunned on.
- (4) All the impurities such as scraps and thrums must be cleared out of the unit.

2. Test operation method

- (1) Switch on power, press "ON/OFF" button on the wireless remote control to start the operation
- (2) Press MODE button, to select the COOL, HEAT (not available for cooling only unit is), FAN and so on to check :
 - * All the functions (to make sure the unit functions correctly and poroenty).
 - * Refrigerant (pressures/temperatures at sericea values/pipes should be good).
 - * Drainage (condensate/water flow should be dripping out of drainage pipe ONLY).
 - * Noise (there should be no abnormal symbol)

FINISH INSTALLATION


- 1) Put back all covers, screws removed during installation and start-up.
- 2) Properly note, mark, organize and secure wires.
- 3) Caulk the opening to weatherproof level at opening frame both inside and outside.
- 4) Do a final visual inspection.
- 5) Teach or instruct owner or users how to correctly operate the system and answer their questions.
- 6) Check against all items in Product/Warranty Registration Card and sign it for the owner.





FAULT INDICATION

D101	Meaning	D102	Meaning	D103	Meaning
Blink once	Compressor operates	Blink once	Air exhaust protection frequency limit	Blink once	Air exhaust protection frequency limit
Twice	Compressor high pressure protection unit stop	Twice	Cooling overload frequency reducing	Twice	Cooling overload frequency limit
Three times	Air exhaust protection unit stop	Three times	Over current protection frequency reducing	Three times	Over current protection frequency limit
Four times	Communication malfunction unit stop (Include indoor unit and driver)	Four times	Phase current protection frequency reducing	Four times	Phase current protection frequency limit
Five times	IPM modular protection unit stop	Five times	Heating A unit anti-high temperature frequency reducing	Five times	Heating A unit anti-high temperature frequency limit
Six times	Over current protection unit stop	Six times	Heating B unit anti-high temperature frequency reducing	Six times	Heating B unit anti-high temperature frequency limit
Seven times	Cooling overload unit stop	Seven times	Heating C unit anti-high temperature frequency reducing	Seven times	Heating C unit anti-high temperature frequency limit
Eight times	Each indoor unit starts heating at same time anti-high temperature protection unit stop	Eight times	Heating D unit anti-high temperature frequency reducing	Eight times	Heating D unit anti-high temperature frequency limit
Nine times	Each indoor unit anti-freezing protection at same time unit stop	Nine times	Defrosting	Nine times	Oil return
Ten times	Outdoor unit temp. sensor malfunction or each indoor unit temp. sensor malfunction unit stop				
Eleven times	Compressor overload protection unit stop				
Twelve times	Compressor low-pressure protection unit stop (preserved)				
Thirteen times	Phase current protection unit stop				
Fourteen times	E2 PROM Error unit stop				
Fifteen times	DC power supply short circuit				
D104	Meaning	D105	Meaning	D106	Meaning
Blink once	Outdoor ambient temp. sensor malfunction	Blink once	A unit communication malfunction (cannot receive correct data within 3mins.)	Blink once	B unit communication malfunction (cannot receive correct data within 3mins.)
Twice	Outdoor tube temp. sensor malfunction	Twice	A unit indoor middle temp. sensor malfunction	Twice	B unit indoor middle temp. sensor malfunction
Three times	Outdoor air exhaust temp. sensor malfunction	Three times	A unit indoor outlet pipe temp. sensor malfunction	Three times	B unit indoor outlet pipe temp. sensor malfunction
Four times	Communication malfunction with driver (cannot receive correct data from driver within 10s)	Four times	A unit indoor inlet pipe temp. sensor malfunction	Four times	B unit indoor inlet pipe temp. sensor malfunction
		Five times	A unit indoor ambient temp. sensor malfunction	Five times	B unit indoor ambient temp. sensor malfunction
		Six times	A unit modes conflict	Six times	B unit modes conflict
		Seven times	A unit anti-freezing protection	Seven times	B unit anti-freezing protection
		Eight times	A unit anti-high temp. protection	Eight times	B unit anti-high temp. protection
D107	Meaning	D108	Meaning	D109	Meaning
Blink once	C unit communication malfunction (cannot receive correct data within 3mins.)	Blink once	D unit communication malfunction (cannot receive correct data within 3mins.)	Blink once	Received communication data proof test correct will flash once
Twice	C unit indoor middle temp. sensor malfunction	Twice	D unit indoor middle temp. sensor malfunction		
Three times	C unit indoor outlet pipe temp. sensor malfunction	Three times	D unit indoor outlet pipe temp. sensor malfunction		
Four times	C unit indoor inlet pipe temp. sensor malfunction	Four times	D unit indoor inlet pipe temp. sensor malfunction		
Five times	C unit indoor ambient temp. sensor malfunction	Five times	D unit indoor ambient temp. sensor malfunction		
Six times	C unit modes conflict	Six times	D unit modes conflict		
Seven times	C unit anti-freezing protection	Seven times	D unit anti-freezing protection		
Eight times	C unit anti-high temp. protection	Eight times	D unit anti-high temp. protection		

MAINTENANCE

- 

Use proper instruments for the refrigerant R410A.
- 

Do not use any refrigerant other than R410A.
- 

Do not clean the unit using mineral oil.



WARRANTY AND TECH. SUPPORT

YMGI warrants to the purchaser/owner(s) that YMGI products be free from defects in material and workmanship under the normal use and maintenance, with the standard Limited Product Warranty Policies that comes with the unit or sales package.

YMGI IS NOT RESPONSIBLE FOR

- * Damage or repairs required as a consequence Customer do-it-yourself(DIY) installation and/or any other faulty installation or improper application.
- * Damage or repairs needed as a consequence of any misapplication, abuse, improper servicing, unauthorized alteration, or improper operation.
- * Damage as a result of floods, winds, fires, lightening, accidents, corrosive atmosphere, or other conditions beyond the control of YMGI.
- * Any damages to person or property of whatever kind, direct or indirect, special or consequential, whether resulting from use or loss of use of the product.
- * Failure to start due to voltage conditions, blown fuses, open circuit breakers, or other damages due to the inadequacy or interruption of electrical service.
- * Parts not supplied or designated by YMGI.
- * Products installed outside USA or Canada.
- * Regular equipment maintenance or field service or field inspection.
- * Any problems due to improper cooling and heating load calculation of the room/building the air conditioner/heat pump system is to be installed. Equipment users can get the calculation schedule from your room/building architect or your installation or related service HVAC contractor, who should have knowledge and tools to do these calculation correctly.
- * Any problems due to improper sizing and selecting air conditioner/heat pump system. These equipment sizing and selection work should be conducted by either your room/building architect or your installation or related service HVAC contractor, who should have knowledge and tools to do these calculation correctly, and get your approval, before your purchasing these air conditioner or heat pump equipment.
- * Any problems due to improper installing of the air conditioner/heat pump system. Installation should be conducted by currently licensed HVAC technician, following manufacturer installation instructions, all governing safety codes, with care and professionalism.
- * Any problems due to improper operation of the air conditioner/heat pump system. Users shall keep the manual and look up in the manuals for the correct understanding how the unit will work and how to operate the unit correctly.
- * Any problems due to improper maintenance of the air conditioner/heat pump system. Like a car, regular maintenance or yearly checking is necessary for the unit to work properly for you, before the season comes. For example, air filter shall be checked for cleanliness from time to time. Remote control batteries shall be checked for enough power, before judging the unit is not working...

CONTACT FOR FIELD SERVICE OR REPAIR

The following people, in a prioritized sequence, will take care of your request or issue:

- 1) The original installer; otherwise,
- 2) Your current service contractor; otherwise,
- 3) Authorized contractor in YMGI list that is close to you; otherwise,
- 4) Authorized Distributor in YMGI Distributor list; otherwise,
- 5) Contractor/Distributor you prefer who is close to you.

CONTACT FOR GENERAL TECHNICAL QUESTIONS OR SUPPORT, IN A SEQUENCE:

- 1) The original installer; otherwise,
- 2) The current service contractor; otherwise,

The original licensed installer or current service contractor should be contacted first of all, since they installed the unit and/or know more details than anybody else.
They will check the unit and find out the problems with the professional knowledge about HVAC and electric product installation by using special tools or instrument.
They can contact YMGI technical support for technical help during unit installation or inspection.
Product model and serial numbers needed, which can be found on unit nameplate sticker, so that our technician can quickly identify the unit, parts and wiring diagrams, among our many products and models.
- 3) The distributor; where the unit is purchased from otherwise,
- 4) YMGI Technical Support:

Tel: (866) 833-3138*703 Email: techsp@ymgigroup.com



USER NOTES AND SERVICE LOG

USER NOTES

Put down whatever questions you have or problems you have seen as a unit history:

[illegible]

SERVICE/MAINTENANCE LOG

Put down whatever questions you have or problems you have seen as a unit history:

[illegible]

MEMO

[illegible]